DOCUMENT RESUME

ED 233 909 SE 043 146

TITLE	Water Quality Instructional Resources Information System (IRIS). A Compilation of Abstracts to Water Quality and Water Resources Materials. Supplement XIII.
INSTITUTION	Ohio State Univ., Columbus, Ohio. Information Reference Center for Science, Mathematics, and Environmental Education.
SPONS AGENCY	Environmental Protection Agency, Washington, D.C. Office of Water Programs.
PUB DATE	Apr 83
GRANT	EPA-T-901366010
NOTE	263p.
AVAILABLE FROM	EPA Instructional Resources Center, 1200 Chambers Rd., 3rd Floor, Columbus, OH 43212 (subscription $12.00, $4.00 each).
PUB TYPE	Reference Materials - Bibliographies (131) -- Collected Works - Serials (022)
EDRS PRICE	MF01/PC11 Plus Postage.
DESCRIPTORS	*Audiovisual Aids; Citizen Participation; Environmental Education; Indexes; Information Dissemination; *Instructional Materials; Pesticides; Postsecondary Education; Technology; Waste Disposal; *Waste Water; Water; Water Pollution; *Water Quality; *Water Resources; *Water Treatment
IDENTIFIERS	Hazardous Materials

ABSTRACT

Compiled are abstracts and indexes to selected print and non-print materials related to wastewater treatment and water quality education and instruction, as well as materials related to pesticides, hazardous wastes, and public participation. Sources of abstracted/indexed materials include all levels of government, private concerns, and educational institutions. Title, author(s), publication date, cross-references, descriptors, and availability are provided for each entry. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements of their programs. This publication supplements and does not replace "Water Quality Instructional Resources Information System (IRIS): A Compilation of Abstracts to Water Quality and Water Resources" or IRIS Supplements 1-12. (JN)

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Water

Water Quality Instructional Resources Information System

ED233909

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EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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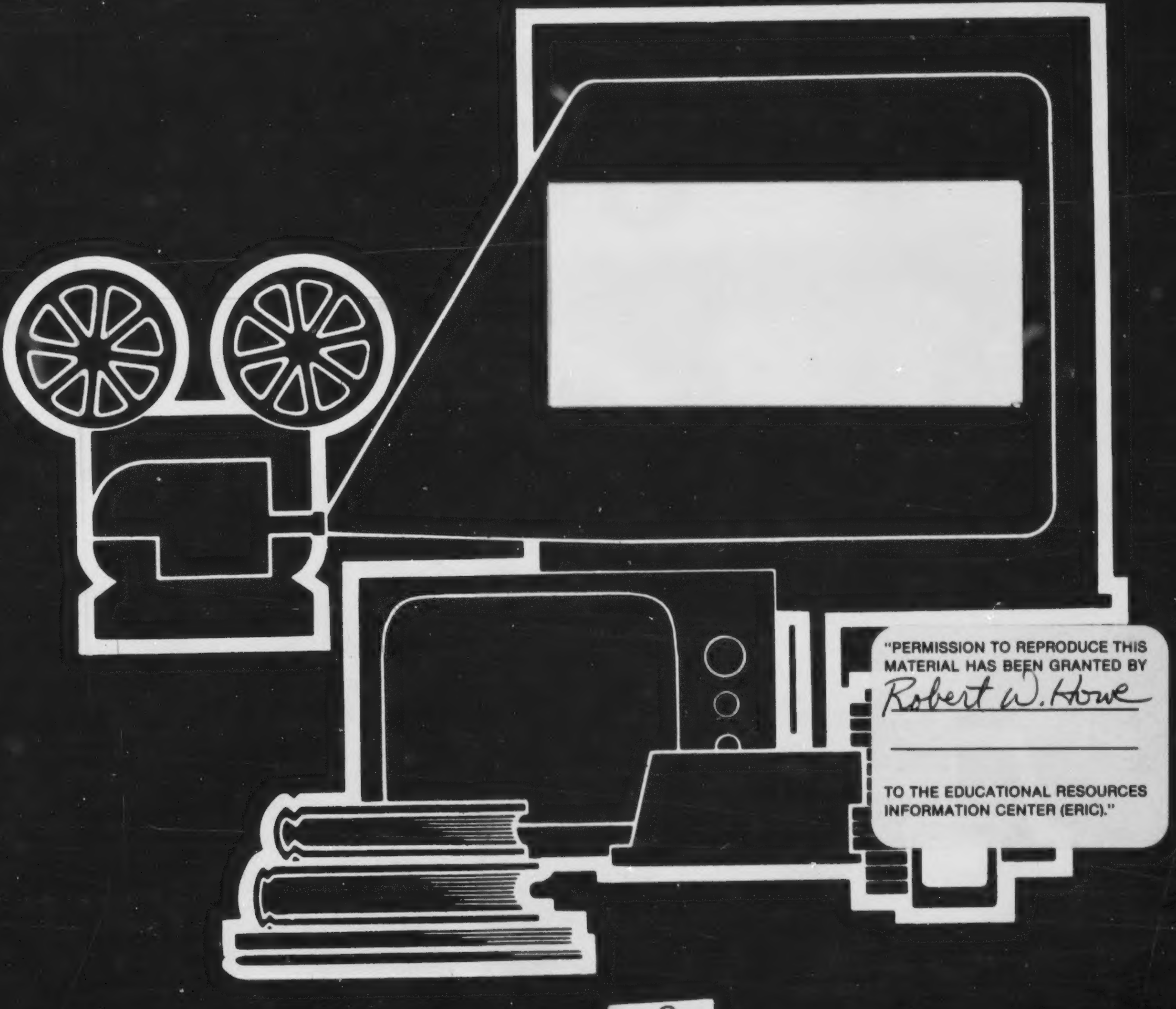

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Prepared by

EPA Instructional Resources Center
SMEAC Information Reference Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

as part of
Grant No. T-901366010

WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS)

A Compilation of Abstracts to Water Quality and Water Resources Materials

Supplement XIII (1983)
April, 1983

This project has been financed (in part) with Federal funds from the U.S. Environmental Protection Agency, Office of Water Program Operations, under grant identification number T-901366010. The contents do not necessarily reflect the views and policies of the U.S. Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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Preface

This publication contains abstracts and indexes to selected materials related to wastewater treatment and water quality education and instruction. In addition, some materials related to pesticides, hazardous wastes, and public participation are included. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements in their programs.

Supplements to this publication will be issued periodically.

For further information about these materials contact:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

(614) 422-6717

I. General Information about Materials in IRIS.

A. What types of materials are included in IRIS?

The EPA Instructional Resources Center (water) acquires, reviews, indexes, and announces both print (books, modules, units, etc.) and non-print (films, slides, video tapes, etc.) materials related to water quality and water resources education and instruction.

Materials selected must be available from some source for announcement. When materials are not readily available we attempt to make the materials available through some national information service for easier acquisition. In a few cases the EPA Instructional Resources Center is the source of the materials.

B. How are materials entered into IRIS?

We request that people assist us in locating materials for the system. If you have materials you believe to be useful to others, please send two copies if possible to the:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

Materials are reviewed by the project staff. Availability of the materials is checked, and the materials are abstracted and indexed. The abstract describes the contents of the material. The index terms (descriptors) are concepts or terms used to describe the contents and the form of the document. (See the Subject Index for a listing of those that have been used.) The index terms are useful for locating materials manually, such as with this compilation, and also by computer.

When items are processed they are entered on the IRIS (water) computer tape. This tape is maintained by the EPA Instructional Resources Center at The Ohio State University and is used for producing tapes for other information systems, publications, and for computer searches conducted at The Ohio State University.

C. How can a user locate materials in IRIS?

1. All materials placed in IRIS (water) collection.

Materials entered into the IRIS (water) collection can be located in two ways: (1) by manual search of this compilation and similar ones to follow and (2) by computer.

The first compilation contained resumes of selected materials processed for the previous IRIS (water) collection and resumes of selected materials of items added to the IRIS (water) collection. A limited number of copies of the compilation in paper copy and microfiche are available free of charge as long as the supply lasts from the EPA Instructional Resources Center. After the free copies of the compilations are gone, copies will be available for purchase from the EPA Instructional Resources Center.

Quarterly updates of the compilation are available by subscription on a yearly basis beginning November, 1979. Information regarding an annual subscription to IRIS (water) Quarterly Compilations can be obtained by writing to the EPA Instructional Resources Center. A subscription to the quarterly supplements for 1983 is $12.00 (within the U.S.). Price to Canada and Mexico is $14.00. Prices in other Countries is $18.00. Separate quarterly supplements are $4.00 each.

The compilation and the quarterly supplements can be scanned and the subject index can be used for manual searches.

Computer tapes of the IRIS (water) collection can also be searched by both batch and on-line computer searches. The IRIS tapes are available for searching through the Bibliographic Retrieval Services, Inc., (BRS) and with Dialog. Any search service that currently subscribes to BRS or Dialog is able to search the IRIS data base by on-line techniques. Individuals or agencies with computer terminals and telephone connection equipment can subscribe to BRS or Dialog and do their own searches if they desire.

Information regarding BRS may be obtained by writing or phoning BRS, 1200 Route 7, Latham, NY 12110, (518) 783-1161.

Information regarding Dialog may be obtained by writing or phoning Dialog Information Retrieval Service, 3460 Hillview Avenue, Palo Alto, CA 94304, (415) 858-3775.

Plans are being made to mount IRIS tapes with other on-line vendors. Information regarding this service will be announced in a future EPA IRC Bulletin and in mailings from the EPA Instructional Resources Center.

2. Materials placed in the Educational Resources Information System (ERIC)

A number of the materials processed for the IRIS (water) system are entered into the ERIC system and announced in Resources in Education (RIE). Resources in Education (RIE) is published monthly and is available from:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(202) 783-3238

The current price is listed in the most recent issue of RIE. Check if a college or university library close to you has a copy. If they do not, contact the EPA Instructional Resources Center for assistance.

Many libraries subscribe to RIE. Materials announced in RIE can be searched manually each month by scanning RIE or by checking the index terms in the back of each issue. Materials announced in RIE can be searched by computer also. ERIC computer tapes may be purchased outright, but most users of the tapes gain access to them through three major database vendors: Dialog, Systems Development Corporation (Orbit), and Bibliographic Retrieval Services. For the addresses of search services in your state that can search these databases, contact the:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Most of the materials announced in RIE are available on microfiche (microfilm) at over 700 sites throughout the United States and the world. Users can view these materials on site at many locations to identify what they believe will be useful to them at no cost. Microfiche copies (or in most cases Xerox copies) can be ordered through the ERIC Document Reproduction Service. The address and order information is in the back of each issue of RIE. Xerox copies of many items related to water quality and resource education and training can also be ordered through the EPA Instructional Resources Center for $0.03 per page plus $1.00 per document.

For information about locations of ERIC microfiche sites in your state, contact the EPA Instructional Resources Center.

A number of journal articles processed for the IRIS (water) system are entered into the ERIC system and announced in Current Index to Journals in Education (CIJE).

Current Index to Journals in Education is published monthly and is available from:

ORYX Press
2214 North Central at encanto
Phoenix, Arizona 85004
(602) 254-6156

Many libraries subscribe to CIJE. Materials announced in CIJE can be searched manually each month by scanning CIJE or by checking the index terms in the back of each issue. Materials announced in CIJE can be searched by computer also. Refer to the previous discussion of RIE concerning computer searches.

Materials announced in CIJE can be located in journals at many university libraries.

Many of the articles can be obtained from University Microfilms. Current prices are $8.00 per article and $10.00 for articles dated prior to January 1981. For further information write to:

UMI Article Reprint Department
300 North Zeeb Road
Ann Arbor, Michigan 48106
(800) 521-0600

II. How to Use the Compilation

A. Description of Information in Resumes

Each resume is listed by EW number in numerical order in the resume section. Two samples of resumes are provided to explain the data fields in the resumes. Sample resume #1 is a sample resume of an item not entered into ERIC. Sample resume #2 is a sample resume of an item entered into ERIC; a few additional data elements are in these resumes and are explained.

1. Sample resume of materials not entered in ERIC

   a. IRIS NUMBER: EW006023
   b. PUBLICATION DATE: FEB 81
   c. TITLE: PROGRAMMED APPROACH TO WATER/MASS ANALYSES.
   d. PERSONAL AUTHOR: SPENCE, GEORGE R., JR.
   e. DESCRIPTOR: *DESIGN; *ENGINEERING; *EQUIPMENT; *MASS BALANCE; *PROJECT DESIGN; *POLLUTION ENGINEERING; *PIPES; *WATER RESOURCES

   f. DESCRIPTIVE NOTE: 30-33P.
   g. ABSTRACT: DURING THE ENGINEERING PHASE OF A PROJECT DESIGN, WATER REQUIREMENTS OFTEN CHANGE AS NEW INFORMATION BECOMES AVAILABLE. THIS ARTICLE DETAILS A PROGRAMMED APPROACH TO CALCULATION OF A WATER/MASS BALANCE WHICH PROVIDES THE USER WITH THE ABILITY TO READILY ASSESS THE IMPACT OF VARYING WATER QUALITIES, FLOW PATTERNS, AND FLOW RATES. THIS INFORMATION IS THEN USED IN DETERMINING PIPE AND EQUIPMENT SIZES.

   h. AVAILABILITY: POLLUTION ENGINEERING; V13 N2

   a. IRIS NUMBER -- this is the identification number sequentially assigned to materials as they are processed. Gaps in numbers mean that some items have been deleted, are being processed to add new information, or have been delayed in processing for some reason.

   b. PUBLICATION DATE -- date material was published according to information on the material.

   c. TITLE

   d. PERSONAL AUTHOR -- person or persons who wrote, compiled, or edited the material. Up to two personal authors can be listed.

   e. DESCRIPTOR -- subject terms which characterize substantive contents and form of the materials. The major terms are preceeded by an asterisk. Terms used to index all resumes in this compilation can be reviewed in the Subject Index.

   f. DESCRIPTIVE NOTE -- various items of information may be contained in this section. For print materials the number of pages is usually listed. The price of the material quoted is the last time information was received from the source. Please note: Prices of nearly all materials are subject to changes and may not be accurate at the time a person orders a specific item.

g. ABSTRACT -- some early materials entered into IRIS did not have abstract information. All materials currently being entered into IRIS have an informative abstract that describes the contents of the item.

h. AVAILABILITY -- information in this field indicates where the material can be obtained.

2. Sample resume of material entered into ERIC (Resources in Education)

Items entered into ERIC (Resources in Education) will have a few additional data fields.

IRIS ACCESSION NUMBER: EW006664
PUBLICATION DATE: 80
TITLE: RESOURCE DEVELOPMENT OF WATERSHED LANDS: A SIX WEEK SHORT COURSE.
DESCRIPTOR: ADMINISTRATION; ECOLOGICAL FACTORS; ECONOMIC FACTORS; INSTRUCTIONAL MATERIALS; *LAND USE; NATURAL RESOURCES; *POST SECONDARY EDUCATION; *TECHNICAL EDUCATION; *WATER RESOURCES; HYDROLOGY; NATURAL RESOURCES MANAGEMENT; WATER QUALITY; *WATERSHEDS

b. DESCRIPTIVE NOTE: EDRS PRICE: MF01 PLUS POSTAGE-NOT AVAILABLE IN HARD COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT.

ABSTRACT: THIS COURSE WAS DESIGNED TO PROVIDE THE WATER
RESOURCE TECHNICIAN OR MANAGER WITH INFORMATION WHICH
WILL AID IN THE IMPLEMENTATION OF IMPROVEMENTS OF
PRESENT LAND USE PRACTICES AND TO ILLUSTRATE ALTERNATIVE
CONCEPTS AND TECHNIQUES IN LAND AND WATER USE FOR
INCREASING AND IMPROVING THE MULTIPLE PRODUCTS OF
a. WATERSHED LANDS. (ED 197 941)

AVAILABILITY: ERIC DOCUMENT REPRODUCTION SERVICE, P. O. BOX 190, ARLINGTON, VA 22210

a. ERIC NUMBER -- the ED number indicates the document has been processed and entered into Resources in Education. This identification number is the number to use when ordering a document or when requesting information about a document.

b. EDRS PRICE -- if material is available through the ERIC Document Reproduction Service, the price of the material when it was entered into the ERIC system and the form of the material is indicated. "MF" means microfiche; "HC" means Xerox copy. Prices are subject to change. Current prices of microfiche and paper copies are listed in the back of each issue of Resources in Education; consult the latest monthly issue for current prices. Information about ordering items can be obtained by contacting:

ERIC Document Reproduction Service (EDRS)
P. O. Box 190
Arlington, Virginia 22210
(703) 841-1212

Items that are available on microfiche (MF) are contained in microfiche collections at over 700 sites where they can be read. For information on the microfiche locations in your state contact the EPA Instructional Resources Center.

B. How to Locate Desired Materials

Users can identify materials of interest by scanning the resume listings, or using the Subject Index or Author Index.

1. Subject Index

The Subject Index is designed to enable the user to search for information on either a broad subject or a narrow information concern. An EW number is included for each item listed under the subject heading. The EW number refers to the abstract entry in the resume section where complete bibliographic information, an abstract of the item, and availability information can be found.

A user can also coordinate a search by checking EW numbers that appear under two or more subject headings. For example, you could check all the EW numbers under Water Treatment and all the EW numbers under Films. EW numbers included under both subject headings would include information relevant to Water Treatment that were films. EW numbers under wastewater treatment and laboratory techniques would provide a list of materials related to Laboratory Techniques and to Wastewater Treatment. Similar techniques could be used to identify other information desired.

Users with ERIC microfiche should check the resume entry. If the document is available on microfiche from the ERIC Document Reproduction Service, the availability will be indicated by "MF" on the resume by "EDRS Price." This means libraries with ERIC microfiche collections should have the document on microfiche.

If you want a document available through the ERIC Document Reproduction Service (EDRS) see the section on ordering documents.

2. Author Index

If you desire to locate a document by the name of the author, you can use the Author Index. EW numbers are provided under the author in the Author Index as in the Subject Index. Some documents do not have a listed author; hence, they are not listed in this index.

III. Correcting an Existing IRIS Record

The IRIS data base will be updated on a quarterly basis. Corrections will be made to the data base at those times. You can help improve IRIS by sending corrections for items you find to be in error.

We request that you duplicate (copy) the resume from the compilation, mark the information you believe to be wrong (or incomplete), and send the marked resume to:

EPA Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Corrections of errors will occur in the IRIS tapes at the next update after comments are received.

If you have difficulty obtaining materials from the listed source in the AVAILABILITY section of the resume, please let us know. We will contact the sources to verify whether the materials are available, but your assistance will provide corrections between annual availability checks.

If you are the supplier of materials in IRIS, please let us know if you remove a product from your list, modify a product on your list, or change the price of the product.

IV. Requests to Receive Information about IRIS and the IRC Bulletin

Information regarding IRIS, materials in IRIS, and modifications in the system will be announced in the IRC Bulletin. The Bulletin is issued about six times a year as information is available.

If you are not on the mailing list write to the EPA Instructional Resources Center. Limited numbers of some back issues are still available.

If you need information about IRIS you can also phone (614) 422-6717 with your questions.

V. Requests for Assistance in Using IRIS

A. Assistance in use of IRIS manuals

If you need help in using the IRIS manuals, phone (614) 422-6717 or write to the EPA Instructional Resources Center. Staff are normally available from about 8:30 a.m. to 4:30 p.m. Eastern time to answer your questions.

B. Assistance in accessing IRIS by computer

1. Conducting searches.

   See section VIII.

2. Subscribing to BRS, Inc. for computer searching of IRIS.

   Contact: Bibliographic Retrieval Services, Inc.
   1200 Route 7
   Latham, New York 12110
   (518) 783-1161

3. Subscribing to Dialog for computer searching of IRIS.

   Contact: Dialog Information Retrieval Service
   3460 Hillview Avenue
   Palo Alto, California 94304
   (415) 858-3775

4. Contacting a computer search service (an agency that will conduct a search for you, usually for a fee.)

   The EPA Instructional Resources Center maintains a list of agencies that can conduct searches. Most charge a fee, though some are free to qualified users in a limited geographical area.

   Phone or write to obtain information for your area.

VI. How to Locate Other Relevant Educational Materials

A number of people have requested information related to such areas as management, basic skills (reading, mathematics, writing) human relations, contract negotiations, and other topics. The EPA Instructional Resources Center plans to develop some user service products in selected areas in 1982.

Another excellent source of information for many educational concerns is the ERIC System.

ERIC is a national information system designed and developed by the U.S. Office of Education, and now supported and operated by the National Institute of Education (NIE), for providing ready access to descriptions of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs.

There are 16 Clearinghouses in the nationwide ERIC network. Each specializes in a different, multi-discipline, educational area. Each searches out pertinent documents.

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The 16 ERIC Clearinghouses are listed on the next few pages, together with addresses, telephone numbers, and brief scope notes describing the areas they cover. You can contact them for assistance in locating information relevant to their scope notes.

A. ERIC Clearinghouse on Adult, Career, and Vocational Education
The Ohio State University
National Center for Research in Vocational Education
1960 Kenny Road
Columbus, Ohio 43210
Telephone: (614) 486-3655

Career education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, and specific vocational and occupational skills; adult and continuing education, formal and informal, relating to occupational, family, leisure, citizen, organizational, and retirement roles; vocational and technical education, including new sub-professional fields, industrial arts, and vocational rehabilitation for the handicapped.

B. ERIC Clearinghouse on Counseling and Personnel Services
University of Michigan
School of Education, Room 2108
Ann Arbor, Michigan 48109
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings, theoretical development of counseling and guidance, use and results of personnel procedures such as testing, interviewing, disseminating, and analyzing such information, group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

C. ERIC Clearinghouse on Elementary and Early Childhood Education
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, Illinois 61801
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research and practice related to the development of young children.

D. ERIC Clearinghouse on Educational Management
University of Oregon
Library, Room 108
Eugene, Oregon 97403
Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks and processes of administration, methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

E. ERIC Clearinghouse on Handicapped and Gifted Children
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091
Telephone: (703) 620-3660

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of professional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

F. ERIC Clearinghouse on Higher Education
George Washington University
One Dupont Circle, NW, Suite 630
Washington, DC 20036
Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs; curricular and instructional problems and programs, faculty, institutional research; federal programs, professional education (medical, law, etc.), graduate education, university extension programs, teaching-learning, planning, governance, finance, evaluation, interinstitutional arrangements, and management of higher educational institutions.

G. ERIC Clearinghouse on Information Resources
Syracuse University
School of Education
Huntington Hall
150 Marshall Street
Syracuse, New York 13210
Telephone: (315) 423-3640

Management, operation, and use of libraries; the technology to improve their operation and the education, training, and professional activities of librarians and information specialists. Educational techniques involved in microteaching, systems analysis, and programmed instruction employing audiovisual teaching aids and technology, such as television, radio, computers, and cable television, communication satellites, microforms, and public television.

H. ERIC Clearinghouse for Junior Colleges
University of California at Los Angeles (UCLA)
Mathematical Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024
Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curricula, programs, libraries, and community services.

I. ERIC Clearinghouse on Languages and Linguistics
Center for Applied Linguistics
3520 Prospect Street, NW
Washington, DC 20007
Telephone: (202) 298-9292

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycholinguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly taught languages including English and speakers of other languages.

J. ERIC Clearinghouse on Reading and Communication Skills
National Council of Teacher of English
1111 Kenyon Road
Urbana, Illinois 61801
Telephone: (217) 328-3870

Reading, English, and communication skills, preschool through college. Educational research and development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication--forensics, mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, instruction development, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

K. ERIC Clearinghouse on Rural Education and Small Schools
New Mexico State University
Box 3AP
Las Cruces, New Mexico 88003
Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

L. ERIC Clearinghouse for Science, Mathematics and Environmental Education
The Ohio State University
1200 Chambers Road - Room 310
Columbus, Ohio 43212
Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of interest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.

M. ERIC Clearinghouse for Social Studies/Social Science Education
Social Science Education Consortium, Inc.
855 Broadway
Boulder, Colorado 80302
Telephone: (303) 492-8434

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

N. ERIC Clearinghouse on Teacher Education
American Association of Colleges for Teacher Education (AACTE)
One Dupont Circle, NW, Suite 610
Washington, DC 20036
Telephone: (202) 293-2450

School personnel at all levels, all issues from selection through preservice and inservice preparation and training to retirement; curricula, educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject speciality in other ERIC Clearinghouses; all aspects of physical education.

O. ERIC Clearinghouse on Tests, Measurement, and Evaluation
Educational Testing Service (ETS)
Rosedale Road
Princeton, New Jersey 08541
Telephone: (609) 734-5176

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects of programs.

P. ERIC Clearinghouse on Urban Education
Teachers College, Columbia University
Institute for Urban and Minority Education
Box 40
525 West 120th Street
New York, New York 10027
Telephone: (212) 678-3433

The relationship between urban life and schooling; the effect of urban experiences and environments from birth onward; the academic, intellectual, and social performance of urban children and youth from grade three through college entrance (including the effect of self concept, motivation, and other affective influences), education of urban, Puerto Rican and Asian American populations, and rural and urban black populations; programs and practices which provide learning experiences designed to meet the special needs of diverse populations served by urban schools and which build upon their unique as well as their common characteristics, structural changes in the classroom, school, school system, and community and innovative instructional practices which directly affect urban children and youth; programs, practices, and materials related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, practices, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

Q. Educational Resources Information Center
Central ERIC
National Institute of Education (NIE)
Information Resources Division
1200 - 19th Street, NW
Washington, DC 20208
Telephone: (202) 254-5500

There are other sources of educational information in many states. Included are information dissemination units in the state departments of education, intermediate education units, and local education units. In many cases, a local school administrator or school librarian can help you locate assistance.

VII. How to Structure a Computer Search of IRIS

This explanation relates to the IRIS data base that can be searched on-line through Bibliographic Retrieval Services, Inc. or Dialog. As IRIS becomes available through other sources, information relevant to those services will be provided.

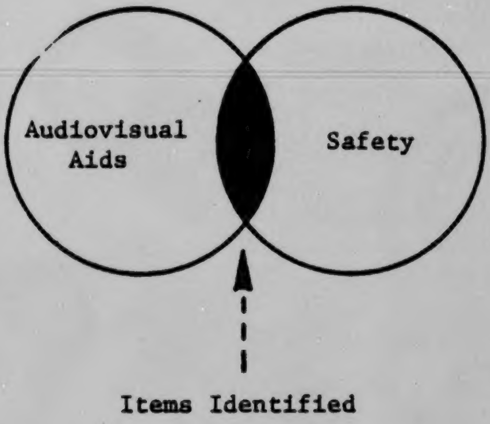
A few notes about the service are important. The following fields are searchable by computer: (1) IRIS Accession Number (EW Number), (2) ERIC Accession Number (ED Number), (3) Authors, (4) Institution, (5) Title, (6) Subject index terms, and (7) Abstracts.

If you submit a search of IRIS through BRS or Dialog, the program will search for the words you select in three fields unless the searcher requests to limit the search. These fields are: (1) title field, (2) subject index field, and (3) abstract. We recommend you use this feature especially for searches on specific terms. If you find more material than you want by this techniqu, you can narrow the search to items that may have the most information on the topic by limiting the search to the subject index field.

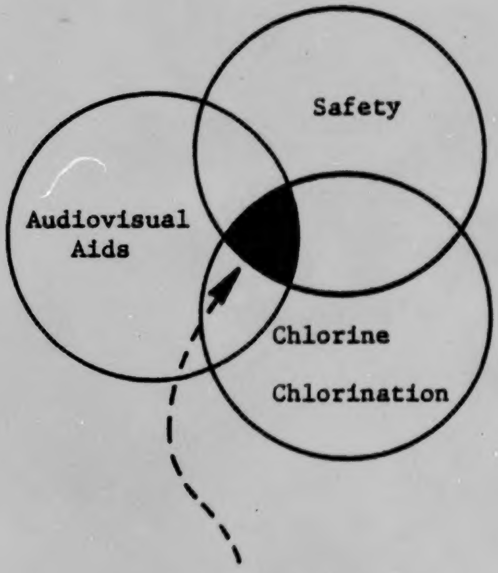
Several sample searches are listed below and on the following pages.

A. Sample 1

If you want to locate audiovisual aids that relate to safety you would submit a search with audiovisual aids and safety. Materials that included the terms both audiovisual aids and safety in the title field, the abstract and the subject index field would be identified by computer.

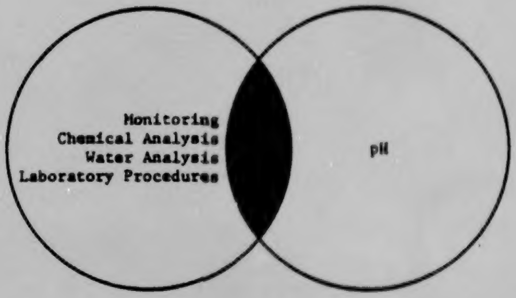


The computer program can tell you the number of items, the title of the items, or print the entire resume of each item. If you were primarily interested in audiovisual aids, safety, and chlorine you would submit a search of these three terms. You might want to include chlorides and chlorination as well as chlorine in the search. This search would identify materials that contained audiovisual aids, safety, and one or more of the words, chlorine and chlorination.



B. Sample 2

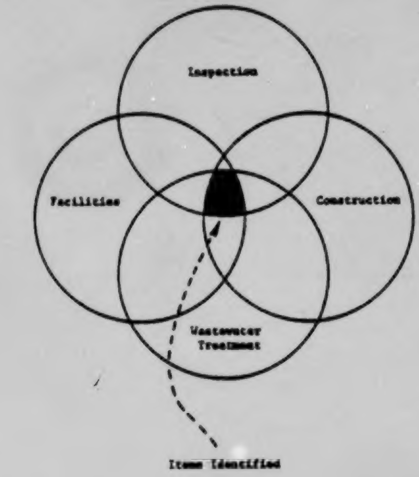
If you want to identify materials related to monitoring, you should include several related terms and the chemical, material, or situation that is being monitored. See the example below.



This search would identify all the items that included any of the terms on the left and pH.

C. Sample 3

If you are interested in materials related to inspection and construction you could conduct a search of these two terms. The search would identify all materials that included both terms. If you were interested in only wastewater treatment facilities you could construct a search as diagrammed.



This search would yield specific materials and demonstrates how a computer search can help you locate materials you want.

The subject index can also be used to help you select words to include in a search. Words listed in the subject index are certain to be in the searchable fields. Therefore, selecting these terms to use in structuring a search will increase the probability of locating materials. Some words will appear in the title or abstract that are not included in the subject term field. Such words can be used to check if any materials are in the data base. If, however, you conduct a search with such a word it is usually best to include a synonym that is in the subject index.

VIII. How to Order Materials

The AVAILABILITY field in the resume indicates where materials can be obtained. A few of the sources are explained.

A. A number of audiovisual materials can be obtained on loan or purchased from the EPA Instructional Resources Center. Most items previously available from the NTOTC office are available from the EPA Instructional Resources Center at The Ohio State University. For further information write or call.

B. Some of the materials are available through the ERIC Document Reproduction Service. MF (microfiche) are 4" x 6" sheets of microfilm; up to 96 pages of text can be reproduced on one sheet. HC (paper copy) is a reproduction of the document in paper form at the original size.

Order forms for these materials can be obtained from:

ERIC Document Reproduction Service
P. O. Box 190
Arlington, Virginia 22210
(703) 841-1212

C. The EPA Instructional Resources Center will provide Xerox copies of materials that are not copyrighted for $1.00 per document plus $0.03 per page.

If you can not obtain materials that are listed or have difficulty obtaining materials, please contact the EPA Instructional Resources Center. We can provide assistance in obtaining materials from some sources. If materials become unavailable, we will remove them from the IRIS data base.

RESUME SECTION

IRIS ACCESSION NUMBER: EW004174

TITLE: A BACHELOR OF ENGINEERING TECHNOLOGY CURRICULUM IN WATER QUALITY MANAGEMENT PROGRAM IMPLEMENTATION.

PERSONAL AUTHOR: COLE, CHARLES A.; AND OTHERS

DESCRIPTOR: *COLLEGE SCIENCE; *DEGREE PROGRAMS; *ENGINEERING; *ENGINEERING EDUCATION; *GUIDELINES; *HIGHER EDUCATION; *IMPLEMENTATION; *MANAGEMENT; *PROGRAM IMPLEMENTATION; *WATER QUALITY

DESCRIPTIVE NOTE: 52P.

ABSTRACT: THIS PUBLICATION PROVIDES IMPLEMENTATION GUIDELINES FOR INSTITUTIONS DESIRING TO DEVELOP BACHELOR OF ENGINEERING TECHNOLOGY PROGRAMS. THIS PROGRAM WAS DESIGNED AS A COMPANION PROGRAM TO THE FOUR-YEAR WASTEWATER TECHNOLOGY CURRICULUM. INCLUDED IN THE PUBLICATION ARE SELF-APPRAISAL SUGGESTIONS FOR INSTITUTIONS, SUGGESTED CURRICULUM, AND COURSE DESCRIPTIONS. APPENDICES INCLUDE WATER QUALITY MANAGEMENT FUNCTIONS, LICENSING, AND PROFESSIONAL ACCREDITATION.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007668

TITLE: A PROCESS DESCRIPTION OF A COURSE IN WASTEWATER TREATMENT PLANT OPERATION DEVELOPED FOR SELF-DIRECTED LEARNERS.

DESCRIPTOR: *ADULT EDUCATION; *ANDRAGOGY; *COURSE DESCRIPTIONS; *EDUCATIONAL PROGRAMS; *FACILITIES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *PROCESS DESCRIPTIONS; *SELF PACED INSTRUCTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 24P.

ABSTRACT: THIS PAPER DESCRIBES A PROCESS FOR HELPING ADULTS TO LEARN MORE ABOUT WASTEWATER TREATMENT PLANT OPERATION USING THE PRINCIPLES OF ANDRAGOGY. INCLUDED ARE A DETAILED BACKGROUND ON ANDRAGOGY, PROGRAM OBJECTIVES, INSTRUCTIONAL OBJECTIVES, AND PROGRAM EVALUATION.

AVAILABILITY: VOCATIONAL-TECHNICAL EDUCATION DEPARTMENT, PITTSBURG STATE UNIVERSITY OF KANSAS, PITTSBURG, KS 66762

IRIS ACCESSION NUMBER: EW007946

PUBLICATION DATE: JUN 82

TITLE: MAKING CHLORINATION TRUSTWORTHY.

PERSONAL AUTHOR: NAGEL, WILLIAM H.

DESCRIPTOR: *CHLORINATION; *DISINFECTION; *INSTRUMENTATION; *MONITORING; *OPERATIONS (WATER); *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 38-39P.

ABSTRACT: WATER CHLORINATION CAN BE MADE DEPENDABLE THROUGH THE USE OF MONITORS THAT CHECK THE AMOUNT OF CHLORINE GOING INTO THE WATER AND THE AMOUNT OF CHLORINE REMAINING. VARIOUS PROCEDURES ARE DESCRIBED.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V129 N7

IRIS ACCESSION NUMBER: EW008101

TITLE: WATER UTILITY SLIDE CONVERTER.

DESCRIPTOR: *CALCULATIONS; *CONVERSION TABLES; *DATA ANALYSIS; *INSTRUMENTATION; *MATHEMATICAL APPLICATIONS; PIPES (WATER); PROCESS CONTROL; SCALES; *SLIDE RULES; *SPECIFICATIONS; WATER QUALITY; *WATER RESOURCES

ABSTRACT: THIS WATER UTILITY DATA CONVERTER CONTAINS RELEVANT INFORMATION TO AID AN OPERATOR IN PROCESS CONTROL AND IN THE DETERMINATION OF DISCHARGE REQUIREMENT DATA. THE CONVERTER INCLUDES THE FOLLOWING: PH SCALE, DETENTION TIME, PIPE FLOW VELOCITY, MOTOR HORSEPOWER, SINGLE PHASE AND THREE PHASE MOTORS, TANK DIMENSIONS, PIPE FRICTION LOSS, DISSOLVED OXYGEN SATURATION, TEMPERATURE CONVERSION, WEIR FLOW, CONCRETE YARDAGE, SEWER SIZE, PARTS PER MILLION TO POUNDS PER DAY, CHLORINE FEED, AND DAILY FLOW.

AVAILABILITY: OKLAHOMA WATER CONSULTANTS & SUPPLY CO., P. O. BOX 236, TECUMSEH, OK 74873

IRIS ACCESSION NUMBER: EW008289

PUBLICATION DATE: 81

TITLE: QUALITY CONTROL IN WATER AND WASTEWATER LABORATORIES - HANDOUTS FOR COURSE 151.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CERTIFICATION; *DATA HANDLING; *LABORATORIES; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *QUALITY CONTROL; *REGULATIONS; *SAFETY; *WATER TREATMENT; *WASTEWATER TREATMENT; *WATER ANALYSIS

DESCRIPTIVE NOTE: 525P. PRICE: $1.00 PER DOCUMENT PLUS $.03 PER PAGE.

ABSTRACT: THESE MATERIALS WERE HAND-OUT MATERIALS FOR THE EPA COURSE "QUALITY CONTROL IN WATER AND WASTEWATER LABORATORIES" PRESENTED AT CINCINNATI, OHIO IN MARCH, 1981. MATERIALS ARE INCLUDED ON REGULATIONS, STATISTICAL QUALITY CONTROL, CERTIFICATION OF LABORATORIES, ELEMENTS OF QUALITY ASSURANCE, DATA HANDLING, AND SAFETY. SOME OF THE MATERIALS ARE PARTS OF SEVERAL OTHER EPA MANUALS AND PUBLICATIONS. A FEW PAGES ARE OF MARGINAL LEGIBILITY.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW008350

PUBLICATION DATE: JUN 82

TITLE: OCEAN WASTE DISPOSAL: OUTFALL SEWERS. 1977-JUNE, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE.)

DESCRIPTOR: AQUATIC ENVIRONMENTS; *BIBLIOGRAPHIES; CONSTRUCTION; *DESIGN; *ENVIRONMENTAL IMPACTS; *MARINE ENVIRONMENT; MODELING; MONITORING; *OCEANS; *OUTFALL SEWERS; POLLUTION CONTROL; *RESEARCH REPORTS; SEWAGE; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 179P. PB82-868720; PRICE CODE: PC N01/MF N01

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING DESIGN, CONSTRUCTION, AND ENVIRONMENTAL EFFECTS OF OUTFALL SEWERS. EFFECTS OF DOMESTIC SEWAGE ON AQUATIC ENVIRONMENTS AND BENTHIC ECOSYSTEMS, AND POLLUTION CONTROL OF OUTFALL SEWERS ARE DISCUSSED. MONITORING OF POLLUTANTS IN SEWAGE, SEDIMENTS, AND CONTAMINANTS FROM SEWERS, AND MODELING OF OUTFALL SEWERS ARE ALSO INCLUDED. (CONTAINS 128 CITATIONS FULLY INDEXED AND INCLUDES A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008482

PUBLICATION DATE: DEC 76

TITLE: RAPID INFILTRATION OF PRIMARY SEWAGE EFFLUENT AT FORT DEVENS, MASSACHUSETTS. CRREL REPORT 76-48.

PERSONAL AUTHOR: SATTERWHITE, M. B.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; CHEMICAL ANALYSES; DESIGN; *EFFLUENTS; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; PHYSICAL PROPERTIES; PROCESS DESCRIPTIONS; *RAPID INFILTRATION; *SEWAGE; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 48P.

ABSTRACT: THIS PUBLICATION REPORTS ON INVESTIGATIONS CONDUCTED AT THE FORT DEVENS, MASSACHUSETTS, WASTEWATER TREATMENT FACILITY WHICH SHOWED THAT RAPID INFILTRATION CAN EFFECTIVELY RENOVATE UNCHLORINATED PRIMARY EFFLUENT TO A QUALITY BETTER THAN THAT ACHIEVED BY CONVENTIONAL TERTIARY WASTEWATER TREATMENT IN A NORTHERN ENVIRONMENT.

AVAILABILITY: CORPS OF ENGINEERS, U. S. ARMY, COLD REGIONS RESEARCH AND ENGINEERING LABORATORY, HANOVER, NEW HAMPSHIRE 03755

IRIS ACCESSION NUMBER: EW008483

PUBLICATION DATE: JUN 76

TITLE: WASTEWATER RENOVATION BY A PROTOTYPE SLOW INFILTRATION LAND TREATMENT SYSTEM. CRREL REPORT 76-19

PERSONAL AUTHOR: ISKANDAR, I. K.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; DECONTAMINATION; *EFFLUENTS; *FACILITIES; LAND APPLICATION; *LAND TREATMENT; *PERFORMANCE EVALUATION; PILOT PLANTS; *RESEARCH REPORTS; *SLOW INFILTRATION; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 54P.

ABSTRACT: SIX OUTDOOR TEST CELLS WERE CONSTRUCTED AT THE U.S. ARMY COLD REGIONS RESEARCH AND ENGINEERING LABORATORY TO INVESTIGATE SLOW INFILTRATION LAND TREATMENT AS A VIABLE ALTERNATIVE TO CONVENTIONAL ADVANCED WASTEWATER TREATMENT. THIS REPORT DESCRIBES THE RESEARCH FACILITIES AND SUMMARIZES THE WATER QUALITY DATA OBTAINED FROM OPERATION OF THE RESEARCH FACILITY.

AVAILABILITY: CORPS OF ENGINEERS, U.S. ARMY, COLD REGIONS RESEARCH AND ENGINEERING LABORATORY, HANOVER, NEW HAMPSHIRE 03755

IRIS ACCESSION NUMBER: EW008510

TITLE: THE USE OF DBC PLUS DRIED BACTERIA CULTURES IN DOMESTIC WASTEWATER TREATMENT FACILITIES.

DESCRIPTOR: *BACTERIA; *BIOLOGICAL TREATMENT; *COSTS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 4P.

ABSTRACT: DESCRIBED IS THE USE OF DBC PLUS DRIED BACTERIA CULTURES IN WASTEWATER TREATMENT. A NUMBER OF ADVANTAGES IN THE USE OF THE BACTERIA ARE REPORTED. USE OF THE BACTERIA ALSO ARE REPORTED TO SAVE A SUBSTANTIAL AMOUNT OF MONEY. GENERAL PROCEDURES FOR THE USE OF THE BACTERIA ARE DESCRIBED.

AVAILABILITY: FLOW LABORATORIES, INC., ENVIRONMENTAL CULTURES DIVISION, 828 W. HILLCREST BOULEVARD, INGLEWOOD, CALIFORNIA 90301 (213) 641-7722

IRIS ACCESSION NUMBER: EW008568

PUBLICATION DATE: NOV 82

TITLE: SAFETY AND THE HUMAN FACTOR.

PERSONAL AUTHOR: SMITH, ANN

DESCRIPTOR: *ACCIDENT PREVENTION; *LABORATORY SAFETY; POST SECONDARY EDUCATION; *PROGRAM DESCRIPTIONS; *SAFETY; SAFETY

EQUIPMENT; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32-34P.

ABSTRACT: DISCUSSES FOUR ELEMENTS OF SAFETY PROGRAMS: (1) SAFETY TRAINING; (2) SAFETY INSPECTIONS; (3) ACCIDENT INVESTIGATIONS; AND (4) PROTECTIVE SAFETY EQUIPMENT. ALSO DISCUSSES SAFETY CONSIDERATIONS IN WATER/WASTEWATER TREATMENT FACILITIES FOCUSING ON FALLS, DROWNING HAZARDS, TRICKLING FILTERS, CONFINED SPACE ENTRY, COLLECTION/DISTRIBUTION SYSTEM SAFETY, CHLORINE, FIRE EXTINGUISHERS, CHEMICALS, AND LABORATORY SAFETY.

AVAILABILITY: WATER ENGINEERING AND MANAGEMENT; V129 N12

IRIS ACCESSION NUMBER: EW008583

PUBLICATION DATE: APR 81

TITLE: SYNTHETIC ORGANIC PESTICIDES AND TERATOGENESIS A REVIEW OF LITERATURE.

PERSONAL AUTHOR: GAUTSCHE, JULIA

DESCRIPTOR: *CHEMICALS; EMBRYOTOXINS; *HEALTH EFFECTS; *LITERATURE REVIEWS; *PESTICIDES; PUBLIC HEALTH; *RESEARCH REPORTS; *TERATOGENESIS

DESCRIPTIVE NOTE: 36P. PRICE: $1.00 PER DOCUMENT PLUS $0.03 PER PAGE.

ABSTRACT: THE PURPOSE OF THIS REVIEW OF LITERATURE WAS TO DETERMINE THE EXISTENCE OF DOCUMENTATION OF EMBRYOTOXIC AND TERATOGENIC EFFECTS RESULTING FROM MATERNAL PESTICIDE EXPOSURE. SECTIONS INCLUDE: SUMMARY OF PESTICIDE USAGE, CLASSIFICATION OF PESTICIDES, PESTICIDES AND TERATOGENESIS, ORGANIZATIONAL PATTERN, ORGANOPHOSPHATES AND CARBAMATES, ORGANOCHLORINES, NITRO-AND CHLOROPHENOLS, AND REVIEW ARTICLES AND STUDIES OF UNSPECIFIED PESTICIDES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW008584

PUBLICATION DATE: MAY 82

TITLE: AQUIFER RESTORATION 8 GROUND WATER REHABILITATION - A LIGHT AT THE END OF THE TUNNEL. THE PROCEEDINGS OF THE SECOND NATIONAL SYMPOSIUM ON AQUIFER RESTORATION AND GROUND WATER MONITORING.

DESCRIPTOR: *AQUIFER REHABILITATION; *AQUIFERS; *CONFERENCE PROCEEDINGS; CONTAMINATION; EQUIPMENT; *GROUNDWATER; INSTRUMENTATION; MONITORING; PLANNING; *RESEARCH REPORTS; SAMPLING; *STATE-OF-THE-ART REVIEWS; WATER QUALITY; *WATER RESOURCES; WATER TREATMENT; *WELLS

DESCRIPTIVE NOTE: 374P. PRICE: $25.00

ABSTRACT: THIS PUBLICATION CONTAINS THE PROCEEDINGS FROM THE SECOND ANNUAL SYMPOSIUM ON AQUIFER RESTORATION AND GROUNDWATER MONITORING HELD IN COLUMBUS, OHIO, ON MAY 26-28, 1982. GOVERNMENT OFFICIALS, CONSULTING ENGINEERS AND GEOLOGISTS, RESEARCHERS, AND INDUSTRY REPRESENTATIVES MET TO LEARN AND DISCUSS STATE-OF-THE-ART TECHNIQUES EMPLOYED AND VARIABLES TO CONSIDER IN GROUNDWATER MONITORING STUDIES AND AQUIFER CLEANUP PROJECTS. IN ADDITION, THE LATEST IN STATE-OF-THE-ART INSTRUMENTATION AND EQUIPMENT WAS DISCUSSED.

AVAILABILITY: NATIONAL WATER WELL ASSOCIATION, 500 W. WILSON BRIDGE ROAD, WORTHINGTON, OH 43085

IRIS ACCESSION NUMBER: EW008595

PUBLICATION DATE: JAN 83

TITLE: ECONOMIC RESEARCH NEEDS RELEVANT TO IMPROVED DRINKING WATER QUALITY.

PERSONAL AUTHOR: RUSSELL, CLIFFORD S.

DESCRIPTOR: *DRINKING WATER; *ECONOMICS; *DOSE-RESPONSE; *POLICIES; *PUBLIC HEALTH; *RESEARCH; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 6-9P.

ABSTRACT: THE ROLE ECONOMISTS CAN ASSUME IN ASSESSING PUBLIC POLICIES FOR IMPROVING DRINKING WATER QUALITY IS DISCUSSED. ECONOMETRIC TECHNIQUES CAN AND SHOULD BE APPLIED TO FIELDS OF INVESTIGATION THAT HAVE TRADITIONALLY BEEN LIMITED TO HEALTH RESEARCH.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V75 N1

IRIS ACCESSION NUMBER: EW008596

PUBLICATION DATE: JAN 83

TITLE: RESEARCH NEEDS FOR WATER SUPPLY COST ESTIMATING.

PERSONAL AUTHOR: CLARK, ROBERT M.

DESCRIPTOR: *COSTS; *COST ESTIMATES; *DRINKING WATER; *ECONOMICS; *FINANCES; *MANAGEMENT; *OPERATIONS (WATER); *RESEARCH; *WATER DISTRIBUTION; *WATER SUPPLY

DESCRIPTIVE NOTE: 10-13P.

ABSTRACT: THIS REPORT SUMMARIZES THE NEED FOR RESEARCH TO DEVELOP COST-ESTIMATING METHODOLOGIES PERTAINING TO UNIT PROCESS COSTS, WATER DELIVERY COSTS, TOTAL MANAGEMENT COSTS, AND FINANCING COSTS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V75 N1

IRIS ACCESSION NUMBER: EW008597

PUBLICATION DATE: JAN 83

TITLE: RESEARCH NEEDS FOR CAPACITY PLANNING.

PERSONAL AUTHOR: LAURIA, DONALD T.

DESCRIPTOR: *COSTS; *CAPACITY PLANNING; *DESIGN; *PLANNING; *RESEARCH; *WATER RESOURCES; *WATER SUPPLY; *WATER TREATMENT; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 14-19P.

ABSTRACT: THE GOAL OF THIS SUBCOMMITTEE REPORT IS TO IDENTIFY GAPS IN EXISTING KNOWLEDGE REGARDING CAPACITY PLANNING FOR COMMUNITY WATER SUPPLY FACILITIES SO THAT AN AGENDA FOR RESEARCH PRIORITIES CAN BE IDENTIFIED AND ADOPTED TO ELIMINATE DEFICIENCIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V75 N1

IRIS ACCESSION NUMBER: EW008598

PUBLICATION DATE: JAN 83

TITLE: A RESEARCH AGENDA FOR MUNICIPAL WATER DEMAND FORECASTING.

PERSONAL AUTHOR: BOLAND, JOHN J.

DESCRIPTOR: BIBLIOGRAPHIES; *FORECASTING; *MANAGEMENT; *PLANNING; *RESEARCH NEEDS; *WATER DEMAND; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 20-23P.

ABSTRACT: LONG-RANGE FORECASTING OF THE DEMAND FOR WATER IS OF FUNDAMENTAL IMPORTANCE WHEN INVESTMENT DECISIONS DEPEND ON ACCURATE PREDICTIONS. SHORT-RANGE FORECASTS ARE LESS COMMONLY USED, BUT ARE NEEDED FOR OPERATIONAL PLANNING AND BUDGETING. IMPROVEMENTS IN THE ACCURACY OF FORECASTING MODELS FOR BOTH PURPOSES ARE NEEDED, AND THE WATER INDUSTRY NEEDS TO USE EXISTING TECHNIQUES MORE FULLY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V75 N1

IRIS ACCESSION NUMBER: EW008599

PUBLICATION DATE: JAN 83

TITLE: WATER PRICING RESEARCH NEEDS.

PERSONAL AUTHOR: MANN, PATRICK C.

DESCRIPTOR: *COSTS; *ECONOMICS; *RATES; *RESEARCH NEEDS; *WATER RATES; *WATER SUPPLY; *WATER SERVICE; *WATER USE

DESCRIPTIVE NOTE: 24-27P.

ABSTRACT: THIS REPORT REVIEWS THE EXISTING KNOWLEDGE OF WATER PRICING, IDENTIFIES GAPS IN KNOWLEDGE ABOUT THE EFFECTS OF WATER RATES, AND DESIGNATES AREAS IN WHICH PRIORITY RESEARCH IS NEEDED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V75 N1

IRIS ACCESSION NUMBER: EW008600

PUBLICATION DATE: JAN 83

TITLE: THE ECONOMICS OF LEAK DETECTION AND REPAIR--A CASE STUDY.

PERSONAL AUTHOR: MOYER, ELLEN E.; AND OTHERS

DESCRIPTOR: *COSTS; *COST-BENEFIT; *LEAK DETECTION; *LEAKS; *MAINTENANCE; *PERFORMANCE EVALUATION; *REPAIRS; *RESEARCH; *WATER DISTRIBUTION; *WATER SUPPLY

DESCRIPTIVE NOTE: 29-34P.

ABSTRACT: THIS ARTICLE ANALYZES THE COSTS AND BENEFITS OF A LEAK DETECTION AND REPAIR PROGRAM FOR A PUBLICLY OWNED WATER UTILITY. THE CHARACTERISTICS OF DIFFERENT TYPES OF LEAKS AND THE ACCURACY OF THE DETECTION METHOD USED ARE ALSO DISCUSSED. THE RESULTS OF THE ANALYSIS DEMONSTRATE THAT BENEFITS OUTWEIGH COSTS AND THAT THE PROGRAM HAS LED TO A SUBSTANTIAL DECREASE IN UNACCOUNTED-FOR-WATER WITHOUT INCURRING GREATER REPAIR COSTS FOR THE SYSTEM.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V75 N1

IRIS ACCESSION NUMBER: EW008601

PUBLICATION DATE: JAN 83

TITLE: EFFICIENCY OF POINT-OF-USE TREATMENT DEVICES.

PERSONAL AUTHOR: REGUNATHAN, P.; AND OTHERS

DESCRIPTOR: *BACTERIA; *CHEMICAL REMOVAL; *EQUIPMENT; *FACILITIES; *ONSITE TREATMENT; *POINT-OF-USE TREATMENT; *POTABLE WATER; *PARTICULATES; *PERFORMANCE EVALUATION; *WATER TREATMENT; *WATER SUPPLY

DESCRIPTIVE NOTE: 42-50P.

ABSTRACT: PERFORMANCES OF TWO DEVICES FOR POINT-OF-USE TREATMENT ARE REPORTED. THESE DEVICES WERE STUDIED IN ORDER TO DETERMINE THE EXTENT TO WHICH THEY WERE ABLE TO REMOVE VARIOUS ORGANIC, INORGANIC, MICROBIOLOGIC, AND PARTICULATE CONTAMINANTS FROM POTABLE WATER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V75 N1

IRIS ACCESSION NUMBER: EW008602

PUBLICATION DATE: JAN 83

TITLE: DISINFECTION, WATER QUALITY CONTROL, AND SAFETY PRACTICES OF THE WATER UTILITY INDUSTRY IN 1978 IN THE UNITED STATES.

DESCRIPTOR: *DISINFECTION; *FACILITIES; *OPERATIONS (WATER); *SAFETY; *SURVEYS; *WATER QUALITY CONTROL; *WATER TREATMENT; *WATER TREATMENT PRACTICES

DESCRIPTIVE NOTE: 51-56P.

ABSTRACT: MORE THAN 300 UTILITIES ANSWERED QUESTIONS ABOUT THEIR DISINFECTION, WATER QUALITY CONTROL, AND SAFETY PRACTICES. AN ANALYSIS OF THE ANSWERS IS PROVIDED IN THIS REPORT.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V75 N1

IRIS ACCESSION NUMBER: EW008603

PUBLICATION DATE: JAN 83

TITLE: STUDY OF PLANT PERFORMANCE AT KEY WEST ADVANCES REVERSE OSMOSIS TECHNOLOGY.

DESCRIPTOR: *DESALINATION; *FACILITIES; *FLORIDA; *OPERATIONS (WATER); *POTABLE WATER; *REVERSE OSMOSIS; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 26-28 NEWSP.

ABSTRACT: DESCRIBED IS A REVERSE OSMOSIS DESALINATION PLANT AT KEY WEST, FLORIDA FOR PRODUCING POTABLE WATER. THE OPERATION HAS BEEN EFFECTIVE AND FUNCTIONED BETTER THAN EXPECTATIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V75 N1

IRIS ACCESSION NUMBER: EW008611

PUBLICATION DATE: JUN 82

TITLE: A COURSE ON OPERATIONAL CONSIDERATIONS IN WASTEWATER TREATMENT PLANT DESIGN. INSTRUCTOR'S MANUAL.

PERSONAL AUTHOR: COOPER, JOHN W.; AND OTHERS

DESCRIPTOR: *COURSE CONTENT; *FACILITY IMPROVEMENT; *FACILITY GUIDELINES; POST SECONDARY EDUCATION; SLUDGE; *TEACHING GUIDES; *FACILITIES; *DESIGN; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 249P. PRICE: $8.47

ABSTRACT: THIS MANUAL CONTAINS 17 INSTRUCTIONAL UNITS (SEQUENCED TO CORRESPOND TO PARALLEL CHAPTERS IN A STUDENT'S MANUAL) FOCUSING ON UPGRADING THE DESIGN OF WASTEWATER PLANT FACILITIES AND SERVING AS A REFERENCE SOURCE FOR ESTABLISHING CRITERIA FOR UPGRADING WASTEWATER TREATMENT PLANTS. THE MANUAL ALSO FURNISHES INFORMATION FOR MODIFYING PLANT DESIGN TO COMPENSATE FOR CURRENT ORGANIC AND HYDRAULIC OVERLOADS AND/OR TO MEET MORE STRINGENT FUTURE TREATMENT REQUIREMENTS, EMPHASIZING THE IMPORTANCE OF MODIFYING EXISTING PLANTS AND DESIGNING NEW PLANT FACILITIES TO ACCOMMODATE OPERATIONS, MAINTENANCE, AND OTHER ROUTINE PLANT FUNCTIONS. EACH INSTRUCTIONAL UNIT CONTAINS TITLE PAGE, LESSON PLAN, OBJECTIVES, INDEX TO VISUAL AIDS, AND PRESENTATION GUIDE. TOPICS CONSIDERED INCLUDE: FIELD EXPERIENCE - DESIGNING FOR OPERABILITY; MAXIMIZING PLANT OPERATIONS FEEDBACK; PLANS AND SPECIFICATIONS REVIEWS; GENERAL DESIGN CONSIDERATIONS; UNIT PROCESS DESIGNS (HEADWORKS, PRIMARY SEDIMENTATION, AERATION BASINS, SECONDARY SEDIMENTATION, DISINFECTION, EFFLUENT DISCHARGE, SLUDGE TREATMENT, OTHER BIOLOGICAL PROCESSES, AND OTHER FACTORS-SAFETY, ENERGY CONSERVATION AND EMERGENCIES); SYSTEMS APPROACH TO UNIT PROCESS SELECTION; EQUIPMENT SELECTION AND PLACEMENT FOR OPERABILITY (FLEXIBILITY AND MAINTAINABILITY); AND AN OPERATOR SPEAKS TO THE DESIGN ENGINEER. A STUDENT MANUAL (EW 008 612), A VISUAL AID PACKAGE (EW 008 613), AND A FINAL REPORT (EW 008 614) ARE ALSO AVAILABLE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS RD - ROOM 310, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW008612

PUBLICATION DATE: JUN 82

TITLE: A COURSE ON OPERATIONAL CONSIDERATIONS IN WASTEWATER TREATMENT PLANT DESIGN. STUDENT MANUAL.

DESCRIPTOR: *DESIGN; *FACILITY GUIDELINES; *FACILITIES; *FACILITY IMPROVEMENT; POST SECONDARY EDUCATION; RESOURCE MATERIALS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT; INSTRUCTIONAL MATERIALS

DESCRIPTIVE NOTE: 363P. PRICE: $11.89

ABSTRACT: THIS MANUAL WAS DESIGNED TO FURNISH INFORMATION FOR UPGRADING THE DESIGN OF WASTEWATER TREATMENT PLANT FACILITIES AND TO SERVE AS A RESOURCE FOR ESTABLISHING CRITERIA FOR UPGRADING THESE PLANTS. THE MANUAL ALSO FURNISHES INFORMATION FOR MODIFYING PLANT DESIGN TO COMPENSATE FOR CURRENT ORGANIC AND HYDRAULIC OVERLOADS AND/OR TO MEET MORE STRINGENT FUTURE TREATMENT REQUIREMENTS. IN ADDITION, THE IMPORTANCE OF MODIFYING EXISTING PLANT AND DESIGNING NEW PLANT FACILITIES TO ACCOMODATE OPERATION, MAINTENANCE, AND OTHER ROUTINE PLANT FUNCTIONS IS EMPHASIZED. INFORMATION IS PRESENTED IN 17 UNITS, WITH OBJECTIVES, TEXT MATERIAL/FIGURES, AND RESOURCES PROVIDED FOR EACH UNIT. UNIT TOPICS INCLUDE: MAXIMIZING PLANT OPERATIONS FEEDBACK IN WASTEWATER TREATMENT PLANT DESIGN; PLANS AND SPECIFICATIONS REVIEWS; GENERAL DESIGN CONSIDERATIONS; UNIT PROCESS DESIGN FOR PRELIMINARY TREATMENT, PRIMARY SEDIMENTATION, AERATION BASINS, SECONDARY

SEDIMENTATION, DISINFECTION, EFFLUENT DISCHARGE, SLUDGE TREATMENT, ADDITIONAL BIOLOGICAL PROCESSES, AND OTHER FACTORS, INCLUDING (SAFETY, ENERGY CONSERVATION, AND EMERGENCIES); SYSTEMS APPROACH TO UNIT PROCESS SELECTION; EQUIPMENT SELECTION/PLACEMENT FOR OPERABILITY, MAINTAINABILITY; AND OPERATOR/DESIGN ENGINEER RELATIONSHIP. A FORTRAN COMPUTER PROGRAM (WITH ABRIDGED USERS GUIDE) FOR THE PRELIMINARY DESIGN OF WASTEWATER TREATMENT SYSTEMS IS INCLUDED IN UNIT 15. IT IS ASSUMED THAT THE USER OF THIS MANUAL HAS AN ENGINEERING BACKGROUND AND IS FAMILIAR WITH WASTEWATER TREATMENT PLANT DESIGN. AN INSTRUCTOR GUIDE (EW 008 611), A VISUAL AID PACKAGE (EW 008 613), AND A FINAL REPORT (EW 008 614) ARE ALSO AVAILABLE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - ROOM 310, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW008613

PUBLICATION DATE: JUN 82

TITLE: A COURSE ON OPERATIONAL CONSIDERATIONS IN WASTEWATER TREATMENT PLANT DESIGN - VISUAL AIDS PACKAGE.

PERSONAL AUTHOR: SOUTHWEST RESEARCH INST.

DESCRIPTOR: *DESIGN; *FACILITY GUIDELINES; *FACILITIES; *FACILITY IMPROVEMENT; AUDIOVISUAL AIDS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT; POST SECONDARY EDUCATION; RESOURCE MATERIALS

DESCRIPTIVE NOTE: 444 SLIDES & 65 VIEWGRAPHS; PURCHASE PRICE: $0.40/SLIDE, WITH A 10% DISCOUNT FOR OVER 100 SLIDES, $0.75 EACH FOR VIEW GRAPHS; RENTAL PRICE: 5 SETS OF SLIDES ARE AVAILABLE @ $15.00 PER SET

ABSTRACT: THIS MANUAL WAS DESIGNED TO FURNISH INFORMATION FOR UPGRADING THE DESIGN OF WASTEWATER TREATMENT PLANT FACILITIES AND TO SERVE AS A RESOURCE FOR ESTABLISHING CRITERIA FOR UPGRADING THESE PLANTS. THE MANUAL ALSO FURNISHES INFORMATION FOR MODIFYING PLANT DESIGN TO COMPENSATE FOR CURRENT ORGANIC AND HYDRAULIC OVERLOADS AND/OR TO MEET MORE STRINGENT FUTURE TREATMENT REQUIREMENTS. IN ADDITION, THE IMPORTANCE OF MODIFYING EXISTING PLANT AND DESIGNING NEW PLANT FACILITIES TO ACCOMODATE OPERATION, MAINTENANCE, AND OTHER ROUTINE PLANT FUNCTIONS IS EMPHASIZED. INFORMATION IS PRESENTED IN 17 UNITS, WITH OBJECTIVES, TEXT MATERIAL/FIGURES, AND RESOURCES PROVIDED FOR EACH UNIT. UNIT TOPICS INCLUDE: MAXIMIZING PLANT OPERATIONS FEEDBACK IN WASTEWATER TREATMENT PLANT DESIGN; PLANS AND SPECIFICATIONS REVIEWS; GENERAL DESIGN CONSIDERATIONS; UNIT PROCESS DESIGN FOR PRELIMINARY TREATMENT, PRIMARY SEDIMENTATION, AERATION BASINS, SECONDARY SEDIMENTATION, DISINFECTION, EFFLUENT DISCHARGE, SLUDGE TREATMENT, ADDITIONAL BIOLOGICAL PROCESSES, AND OTHER FACTORS, INCLUDING (SAFETY, ENERGY CONSERVATION, AND EMERGENCIES); SYSTEMS APPROACH TO UNIT PROCESS SELECTION; EQUIPMENT SELECTION/PLACEMENT FOR OPERABILITY, MAINTAINABILITY; AND OPERATOR/DESIGN ENGINEER RELATIONSHIP. A FORTRAN COMPUTER PROGRAM (WITH ABRIDGED USERS GUIDE) FOR THE PRELIMINARY DESIGN OF WASTEWATER TREATMENT SYSTEMS IS INCLUDED IN UNIT 15. IT IS ASSUMED THAT THE USER OF THIS MANUAL HAS AN ENGINEERING BACKGROUND AND IS FAMILIAR WITH WASTEWATER TREATMENT PLANT DESIGN. AN INSTRUCTOR'S MANUAL (EW 008 611), A STUDENT MANUAL (EW 008 612) AND A FINAL REPORT (EW 008 614) ARE ALSO AVAILABLE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - ROOM 310, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW008614

PUBLICATION DATE: JUN 82

TITLE: A COURSE ON OPERATIONAL CONSIDERATIONS IN WASTEWATER TREATMENT PLANT DESIGN. FINAL REPORT

PERSONAL AUTHOR: SOUTHWEST RESEARCH INST.,

DESCRIPTOR: *DESIGN; *EVALUATION; *FACILITIES; *FINAL REPORTS; *FIELD TESTS; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: AN INSTRUCTOR'S MANUAL (EW 008 611) A STUDENT'S MANUAL (EW 008 612) AND A VISUAL AIDS PACKAGE (EW 008 613) ARE ALSO AVAILABLE.

ABSTRACT: THIS PROGRAM WAS INITIATED WITH THE OVERALL OBJECTIVE OF UPGRADING AND THEN TESTING EXISTING COURSE MATERIAL ON OPERATIONAL CONSIDERATIONS IN WASTEWATER TREATMENT PLANT DESIGN. EXISTING MATERIAL ALONG WITH NEW MATERIAL WAS USED TO UPGRADE THE STUDENT MANUAL. A MAJOR REVISION AND UPGRADING OF THE INSTRUCTOR'S MANUAL, INCLUDING A DETAILED INSTRUCTOR'S PRESENTATION GUDIE, WAS THEN PREPARED. EXISTING AND NEW SLIDES WERE EDITED FOR INCLUSION IN THE VISUAL AIDS PACKAGE ALONG WITH VIEWGRAPHS OF ALL FIGURES AND TABLES IN THE STUDENT MANUAL. FINALLY, THE COURSE WAS FIELD TESTED AT THE AREA TRAINING CENTER OF THE UNIVERSITY OF MASSACHUSETTS, AMHERST AND THE PRESENTATION EVALUATED. THE STUDENT MANUAL, INSTRUCTOR'S MANUAL AND VISUAL AIDS PACKAGE ARE ACCOMPANYING VOLUMES IN THIS REPORT.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - ROMM 310, OH 43212-1792

IRIS ACCESSION NUMBER: EW008615

PUBLICATION DATE: JAN 81

TITLE: ENVIRONMENTAL IMPACT STATEMENT - ALTERNATIVE WASTE TREATMENT SYSTEMS FOR RURAL LAKE PROJECTS. CASE STUDY NUMBER 4 STEUBEN LAKES REGIONAL WASTE DISTRICT, STEUBEN COUNTY, INDIANA.

DESCRIPTOR: *CASE STUDIES; DESIGN; ECONOMIC FACTORS; *ENVIRONMENTAL IMPACT STATEMENTS; EVALUATION; *FACILITIES; *INDIANA; *ONSITE TREATMENT; PLANNING; *SEWAGE SYSTEMS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 152P.

ABSTRACT: THIS PUBLICATION CONTAINS THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR A WASTE TREATMENT SYSTEM FOR THE STEUBEN LAKES (INDIANA) REGIONAL WASTE DISTRICT. INCLUDED ARE RECOMMENDED ACTIONS WHICH ADDRESS ON-SITE TREATMENT AND EXAMINE ECONOMIC AND ENVIRONMENTAL FACTORS.

AVAILABILITY: US ENVIRONMENTAL PROTECTION AGENCY, REGION V, 230 SOUTH DEARBORN, CHICAGO, IL 60604

IRIS ACCESSION NUMBER: EW008616

PUBLICATION DATE: DEC 80

TITLE: ENVIRONMENTAL IMPACT STATEMENT - ALTERNATIVE WASTE TREATMENT SYSTEMS FOR RURAL LAKE PROJECTS. CASE STUDY NUMBER 3 - SPRINGVALE-BEAR CREEK SEWAGE DISPOSAL AUTHORITY, EMMET COUNTY, MICHIGAN.

DESCRIPTOR: *CASE STUDIES; DESIGN; ECONOMIC FACTORS; *ENVIRONMENTAL IMPACT STATEMENTS; EVALUATION; *FACILITIES; *MICHIGAN; *ONSITE TREATMENT; *PLANNING; *SEWAGE SYSTEMS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 73P.

ABSTRACT: THIS PUBLICATION CONTAINS THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR A WASTE TREATMENT SYSTEM FOR THE SPRINGVALE-BEAR CREEK (MICHIGAN) SEWAGE DISPOSAL AUTHORITY. INCLUDED ARE RECOMMENDED ACTIONS WHICH ADDRESS ON-SITE TREATMENT AND EXAMINE ECONOMIC AND ENVIRONMENTAL FACTORS.

AVAILABILITY: US ENVIRONMENTAL PROTECTION AGENCY, REGION V, 230 SOUTH DEARBORN, CHICAGO, IL 60604

IRIS ACCESSION NUMBER: EW008617

PUBLICATION DATE: JUN 79

TITLE: ENVIRONMENTAL IMPACT STATEMENT - ALTERNATIVE WASTE TREATMENT SYSTEMS FOR RURAL LAKE PROJECTS. CASE STUDY NUMBER 1 CRYSTAL LAKE AREA, SEWAGE DISPOSAL AUTHORITY BENZIE COUNTY, MICHIGAN.

DESCRIPTOR: *CASE STUDIES; DESIGN; ECONOMIC FACTORS; *ENVIRONMENTAL IMPACT STATEMENTS; EVALUATION; *FACILITIES; *MICHIGAN; *ONSITE TREATMENT; PLANNING; *SEWAGE SYSTEMS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 215P.

ABSTRACT: THIS PUBLICATION CONTAINS THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR A WASTE TREATMENT SYSTEM FOR THE CRYSTAL LAKE (MICHIGAN) FACILITY PLANNING AREA. THIS EIS CONCLUDES THAT EXISTING WASTEWATER TREATMENT PLANTS IN THE AREA SHOULD BE REPLACED, BUT COMPLETE ABANDONMENT OF ON-SITE SYSTEMS IS UNJUSTIFIED. INCLUDED ARE ALTERNATIVE PLANS WHICH INCLUDE EXAMINATION OF ENVIRONMENTAL AND ECONOMIC FACTORS.

AVAILABILITY: US ENVIRONMENTAL PROTECTION AGENCY, REGION 5, 230 SOUTH DEARBORN, CHICAGO, IL 60604

IRIS ACCESSION NUMBER: EW008619

TITLE: ENVIRONMENTAL IMPACT STATEMENT - INDIAN LAKE - SISTER LAKES WASTEWATER TREATMENT SYSTEM. BERRIEN, CASS, AND VAN BUREN COUNTIES, MICHIGAN.

DESCRIPTOR: *CASE STUDIES; DESIGN; ECONOMIC FACTORS; *ENVIRONMENTAL IMPACT STATEMENTS; *FACILITIES; LAKES; *MICHIGAN; *PLANNING; SEWAGE; *WASTEWATER TREATMENT; *WATER QUALITY

ABSTRACT: THIS PUBLICATION IS THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONSTRUCTION OF WASTEWATER TREATMENT FACILITIES AT INDIAN LAKE-SISTER LAKES, MICHIGAN. THIS REPORT CONTAINS AN EVALUATION OF THE EXISTING WASTEWATER-RELATED PROBLEMS AND THE TREATMENT NEEDS OF THE FACILITIES PLANNING AREA. CENTRALIZED COLLECTION AND TREATMENT ALTERNATIVES WERE RE-EVALUATED AND DECENTRALIZED ALERNATIVES WERE DEVELOPED AND ANALYZED.

AVAILABILITY: US ENVIRONMENTAL PROTECTION AGENCY, REGION 5, 230 SOUTH DEARBORN STREET, CHICAGO, IL 60604

IRIS ACCESSION NUMBER: EW008620

PUBLICATION DATE: FEB 76

TITLE: MUNICIPAL WATERSHED MANAGEMENT SURVEY.

PERSONAL AUTHOR: DISSMEYER, GEORGE E.; SWANK, WAYNE T.

DESCRIPTOR: FORESTRY; HYDROLOGY; *INFORMATION NEEDS; *LAND USE; *MANAGEMENT; *MUNICIPALITIES; PLANNING; RESEARCH REPORTS; SOUTHEASTERN U.S.; *SURVEYS; WATER QUALITY; *WATER RESOURCES; *WATERSHEDS

ABSTRACT: THIS REPORT PROVIDES A GENERAL SUMMARY OF THE NATURE AND EXTENT OF LAND USES, MANAGEMENT PROBLEMS, AND INFORMATIONAL NEEDS FOR MUNICIPAL WATERSHEDS IN THE SOUTHEASTERN U.S. EMPHASIS IS PLACED ON SMALL AND HEAVILY FORESTED WATERSHEDS AND RELATED FORESTRY ACTIVITIES.

AVAILABILITY: JOURNAL AMERICAN WATER WORKS ASSOCIATION, V68 N2

IRIS ACCESSION NUMBER: EW008633

PUBLICATION DATE: 82

TITLE: TROUBLESHOOTING THE TROUBLESHOOTING COURSE OR DEBUG D'BUGS.

PERSONAL AUTHOR: MAGER, ROBERT F.

DESCRIPTOR: *CONTENT SELECTION; *EVALUATION; *INSTRUCTION;

*INSTRUCTIONAL IMPROVEMENT; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *PERFORMANCE EVALATION; *POST SECONDARY EDUCATION; *TROUBLESHOOTING; *TRAINING

DESCRIPTIVE NOTE: 208P. PRICE: $9.95

ABSTRACT: THIS PUBLICATION IS DESIGNED TO SHOW HOW TO DETECT DIFFERENCES BETWEEN WHAT IS AND WHAT OUGHT TO BE TAUGHT IN COURSES DESIGNED TO TEACH EQUIPMENT MAINTENANCE. IT IS ABOUT HOW TO DETECT ERRORS IN INSTRUCTIONAL CONTENT AND INSTRUCTIONAL PRACTICE. SECTIONS IN THE BOOK INCLUDE: (1) TROUBLESHOOTING STRATEGY; (2) INSTRUCTIONAL CONTENT; (3) INSTRUCTIONAL PRACTICE; AND (4) TROUBLESHOOTING AIDS. EXTENSIVE FLOW CHARTS ARE PROVIDED TO HELP DESIGN INSTRUCTION, IMPROVE CONTENT SELECTION, IMPROVE INSTRUCTION, AND EVALUATE INSTRUCTIONAL OUTCOMES.

AVAILABILITY: PITMAN MANAGEMENT AND TRAINING, PITMAN LEARNING, INC., 6 DAVIS DRIVE, BELMONT, CA 94002

IRIS ACCESSION NUMBER: EW003634

PUBLICATION DATE: 80

TITLE: BASIC LABORATORY SKILLS FOR WATER AND WASTEWATER ANALYSIS.

PERSONAL AUTHOR: CLARK, DOUGLAS W.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *EQUIPMENT; *HANDBOOKS; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *LABORATORY SKILLS; *LABORATORY TECHNIQUES; *POST SECONDARY EDUCATION; *SKILL DEVELOPMENT; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 72P.

ABSTRACT: THIS HANDBOOK PRESENTS THE BASIC SKILLS NECESSARY TO FUNCTION IN A WATER OR WASTEWATER LABORATORY. IT EXPLAINS AND ILLUSTRATES THE TECHNIQUES AND PRINCIPLES INVOLVED WITH AN EMPHASIS ON CORRECT USE OF ROUTINE EQUIPMENT AND PROPER LABORATORY PROCEDURES. SECTIONS INCLUDE GENERAL TECHNIQUES, MEASURING WEIGHTS, MEASURING VOLUMES, OTHER MEASUREMENTS, SAFETY, AND RECORDS.

AVAILABILITY: DIVISION OF GOVERNMENT RESEARCH, INSTITUTE FOR APPLIED RESEARCH SERVICES, THE UNIVERSITY OF NEW MEXICO, ALBUQUERQUE, NM 87108

IRIS ACCESSION NUMBER: EW008645

PUBLICATION DATE: APR 82

TITLE: BIBLIOGRAPHIES ON THE WATER SUPPLY INDUSTRY - RATES AND COST OF SERVICE.

DESCRIPTOR: *BIBLIOGRAPHIES; *ANNOTATED BIBLIOGRAPHIES; *COSTS; *CONSERVATION; *ECONOMICS; *INDUSTRIAL USE; *MUNICIPAL USE; *RATES; *WATER RATES; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 10P.

ABSTRACT: THIS BIBLIOGRAPHY ON RATES AND COSTS OF SERVICE WAS OBTAINED FROM ARTICLES FROM THE JOURNAL OF THE AWWA AND OTHER AWWA PUBLICATIONS. MOST ENTRIES ARE ANNOTATIED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW008646

PUBLICATION DATE: NOV 82

TITLE: AWWA WATERNET USER GUIDE.

DESCRIPTOR: *AWWA; *DATABASES; *BIBLIOGRAPHIES; *INDEXES; *INFORMATION RETRIEVAL; *PUBLICATIONS; *WATERNET; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 50P.

ABSTRACT: THE WATERNET DATABASE IS THE ONLINE INDEX TO ALL PERIODICALS, BOOKS, MANUALS, HANDBOOKS, STANDARDS, AND CONFERENCE PROCEEDINGS PUBLISHED BY AWWA AND AWWARF SINCE 1971. THE INFORMATION IS AVAILABLE THROUGH DIALOG. THIS GUIDE CONTAINS FOUR PARTS: (1) WATERNET THESAURUS; (2) WATERNET SUBJECT CODE LIST; (3) CODEN SEARCHING; AND (4) DATABASE COVERAGE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVENUE DENVER, CO 80235

IRIS ACCESSION NUMBER: EW008647

TITLE: SEWAGE TREATMENT AND DISPOSAL.

DESCRIPTOR: *AUDIOVISUAL AIDS; *EFFLUENTS; *FACILITIES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SEWAGE; *SLIDES; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 40 FULL-FRAME SLIDES AND TEACHER'S BOOKLET. PRICE: $11.00

ABSTRACT: THIS IS A SLIDE PACK OF 40 FULL-FRAME SLIDES AND A TEACHER'S BOOKLET IN A PLASTIC SLIDE WALLET WITH OPTIONAL STIFF BINDER. THE SLIDES DESCRIBE SEWAGE TREATMENT, GIVE AN ACCOUNT OF PROBLEMS OF TREATED AND UNTREATED SEWAGE, CONSIDER PLANTS FOR SMALL COMMUNITIES, AND CONSIDER DISPOSAL OF THE PRODUCTS OF SEWAGE TREATMENT WORKS. THE TEACHERS GUIDE PROVIDES COMPREHENSIVE NOTES.

AVAILABILITY: FOCAL POINT AUDIO VISUAL LTD, 251 COPNOR ROAD, PORTSMOUTH, HANTS P03 5EE

IRIS ACCESSION NUMBER: EW008648

PUBLICATION DATE: WIN 83

TITLE: PROCEEDINGS OF PRACTICAL GROUND-WATER MONITORING CONSIDERATIONS FOR THE MINING INDUSTRY.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *GROUNDWATER; HYDROLOGY; INDUSTRIES; *MINING; *MINING INDUSTRY; *MONITORING; *NATURAL RESOURCES; *PROBLEMS; *RESEARCH; *TECHNOLOGY; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 29-154P.

ABSTRACT: THIS ISSUE CONTAINS 24 PAPERS RELATED TO STATE-OF-THE-ART PRACTICES AND TECHNIQUES AND PROBLEMS ENCOUNTERED IN MONITORING GROUNDWATER AT MINING SITES. THE PAPERS WERE ORIGINALLY PRESENTED AT TWO CONFERENCES HELD IN JULY, 1982.

AVAILABILITY: GROUND WATER MONITORING REVIEW, V3 N1

IRIS ACCESSION NUMBER: EW008649

PUBLICATION DATE: FEB 83

TITLE: A CASE STUDY IN APPLYING ADULT LEARNING THEORY IN DEVELOPING MANAGERS.

PERSONAL AUTHOR: DALOISIO, TONY; FIRESTONE, MARSHA

DESCRIPTOR: *ADULT LEARNERS; *CASE STUDIES; *INSTRUCTION; *LEARNING THEORY; *MANAGERS; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 73-78P.

ABSTRACT: THIS ARTICLE IS A DISCUSSION OF APPLYING ADULT LEARNING THEORY IN DEVELOPING MANAGERS. THE COMPETENCY PROGRAM OFFERED BY THE AMERICAN MANAGEMENT ASSOCIATIONS AS AN APPLICATION OF THESE IDEAS IS DESCRIBED.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V37 N2

IRIS ACCESSION NUMBER: EW008651

PUBLICATION DATE: FEB 83

TITLE: ENVIRONMENTAL DATA DISPLAY.

PERSONAL AUTHOR: HUSSEY, KEVIN J.; AND OTHERS

DESCRIPTOR: *COMPUTER APPLICATIONS; *COMPUTER GRAPHICS; *DATA ANALYSIS; *DATA DISPLAYS; *ENVIRONMENTAL DATA; *ENVIRONMENT; *IMAGE PROCESSING

DESCRIPTIVE NOTE: 78A-85AP.

ABSTRACT: DESCRIBED IS THE USE OF A COMBINATION OF COLOR-CODED GRAPHICS AND IMAGE PROCESSING TECHNIQUES FOR PORTRAYING ENVIRONMENTAL INFORMATION. THE COMBINATION OF THESE TECHNIQUES HAS BEEN MADE POSSIBLE BY LOW-COST COMPUTER HARDWARE. THE EXAMPLE USED TO ILLUSTRATE THE METHODOLOGY RELATES TO AIR QUALITY.

AVAILABILITY: ENVIRONMENTAL SCIENCE 8 TECHNOLOGY; V17 N2

IRIS ACCESSION NUMBER: EW008652

PUBLICATION DATE: FEB 83

TITLE: LABORATORY INFORMATION MANAGEMENT SYSTEMS: PART II.

PERSONAL AUTHOR: DESSY, RAYMOND E.

DESCRIPTOR: *COMPUTER APPLICATIONS; *INDUSTRIES; *INFORMATION MANAGEMENT SYSTEMS; *LABORATORIES; *LIMS; *MANAGEMENT

DESCRIPTIVE NOTE: P277A-282A,286A,290A,294A,296A,300A,303A

ABSTRACT: INCLUDED ARE CAPSULE REPORTS THAT EXPLORE IMPLEMENTATIONS OF LABORATORY INFORMATION MANAGEMENT SYSTEMS (LIMS) BY EIGHT DIFFERENT INDUSTRIAL FIRMS, EACH UNIQUE IN ITS PROBLEMS AND SOLUTIONS. THE APPROACHES VARY EXTENSIVELY AND PROVIDE EXAMPLES FOR OTHER IMPLEMENTORS.

AVAILABILITY: ANALYTICAL CHEMISTRY; V55 N2

IRIS ACCESSION NUMBER: EW008653

PUBLICATION DATE: FEB 83

TITLE: CONTINUOUS FLOW DETERMINATION OF FREE CHLORINE IN WATER.

PERSONAL AUTHOR: AOKL, TOYOAKI; MUNEMORI, MAKOTO

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHLORINE; *DRINKING WATER; *LABORATORY TECHNIQUES; *WATER SUPPLY

DESCRIPTIVE NOTE: 209-212P.

ABSTRACT: REPORTED IS A TECHNIQUE FOR CONTINUOUS FLOW DETERMINATION OF FREE CHLORINE IN WATER USING SEPARATION OF MOLECULAR CHLORINE BY MICROPORUS PTFE TUBING AND UV ABSORPTION OF CLO-.

AVAILABILITY: ANALYTICAL CHEMISTRY; V55 N2

IRIS ACCESSION NUMBER: EW008654

PUBLICATION DATE: FEB 83

TITLE: DETERMINATION OF ARSENIC IN THE PRESENCE OF COPPER BY DIFFERENTIAL PULSE CATHODIC STRIPPING VOLTAMMETRY AT A HANGING MERCURY DROP ELECTRODE.

PERSONAL AUTHOR: SADANA, RAM S.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ARSENIC; *DRINKING WATER; *LABORATORY TECHNIQUES; *MONITORING; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 304-307P.

ABSTRACT: DESCRIBED IS A SIMPLIFIED METHOD FOR DETERMINING ARSENIC IN THE PRESENCE OF COPPER BY DIFFERENTIAL PULSE CATHODIC STRIPPING VOLTAMMETRY (DPCSU). ADDITIONALLY, THE METHOD IS MODIFIED AND STREAMLINED FOR ROUTINE ANALYSIS OF DRINKING WATER.

AVAILABILITY: ANALYTICAL CHEMISTRY; V55 N2

IRIS ACCESSION NUMBER: EW008655

PUBLICATION DATE: FEB 83

TITLE: POTENTIOMETRIC STRIPPING WITH MATRIX EXCHANGE TECHNIQUES IN FLOW INJECTION ANALYSIS OF HEAVY METALS IN GROUNDWATERS.

PERSONAL AUTHOR: HU, ALEX; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CADMIUM; *COPPER; *COMPUTER APPLICATIONS; *GROUNDWATER; *LABORATORY PROCEDURES; *LEAD; *METALS; *MONITORING; *PERFORMANCE EVALUATION; *TRACE METALS; *WATER SUPPLY

DESCRIPTIVE NOTE: 320-328P.

ABSTRACT: POTENTIOMETRIC STRIPPING ANALYSIS, IN CONJUNCTION WITH FLOW INJECTION ANALYSIS TECHNIQUES, PROVIDES A CONVENIENT AUTOMATED METHOD FOR THE DETERMINATION OF CU, CD, AND PB IN GROUNDWATER. THE THEORY BEHIND THE METHOD IS DEVELOPED, AND THE HARDWARE, SOFTWARE, AND INSTRUMENTATION REQUIRED ARE PRESENTED.

IRIS ACCESSION NUMBER: EW008656

PUBLICATION DATE: JAN 83

TITLE: KALAMAZOO GUIDED BY LONG-RANGE "OPERATIONS MANUALS."

DESCRIPTOR: *COSTS; *ECONOMICS; *MANAGEMENT; *MICHIGAN; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PROGRAM DESCRIPTIONS; *WATER SUPPLY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 18, 49P.

ABSTRACT: DESCRIBED IS THE KALAMAZOO (MICHIGAN) WATER/WASTEWATER SYSTEM. THE SYSTEM HAS BEEN OPERATED EFFECTIVELY MAINTAINING WATER SUPPLIES, PROVIDING GOOD SERVICE, CONTROLLING COSTS AND DEVELOPING PLANS FOR FUTURE NEEDS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N1

IRIS ACCESSION NUMBER: EW008657

PUBLICATION DATE: JAN 83

TITLE: ELECTROLYTIC SIDESTREAM PROCESS SOLVES ODOR AND OTHER PROBLEMS.

DESCRIPTOR: *ELECTROLYTIC SIDESTREAM PROCESS; *MISSOURI; *ODOR; *ODOR CONTROL; *OPERATIONS (WASTEWATER); *PROCESS DESCRIPTIONS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 22-23P.

ABSTRACT: DESCRIBED IS AN ELECTROLYTIC SIDESTREAM PROCESS THAT SOLVED ODOR AND OTHER PROBLEMS IN KANSAS CITY, MISSOURI.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N1

IRIS ACCESSION NUMBER: EW008658

PUBLICATION DATE: JAN 83

TITLE: GROUNDWATER DEVICE DOES DOUBLE DUTY.

DESCRIPTOR: *GEOMON; *GROUNDWATER; *EQUIPMENT; *INSTRUMENTATION; *PIEZOMETERS; *SAMPLERS; *SAMPLING; *WATER QUALITY

DESCRIPTIVE NOTE: 22P.

ABSTRACT: DESCRIBED IS THE GEOMON, A DUAL-PURPOSE DEVICE WHICH FUNCTIONS AS A GROUNDWATER SAMPLER AND PIEZOMETER.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N1

IRIS ACCESSION NUMBER: EW008659

PUBLICATION DATE: JAN 83

TITLE: WHAT MAKES A SLUDGE COLLECTOR DRIVE TICK?

PERSONAL AUTHOR: SAFFRAN, E. P.

DESCRIPTOR: *EQUIPMENT; *OPERATIONS (WASTEWATER); *SLUDGE; *SLUDGE COLLECTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 24-28, 45P.

ABSTRACT: THE HEART OF A CIRCULAR SLUDGE COLLECTOR IS THE DRIVE AND ITS GEARING. UNDERSTANDING THESE SYSTEMS IS A MUST FOR THOSE WHO DEAL WITH THEM. TYPES OF COLLECTORS ARE DESCRIBED IN THIS ARTICLE.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N1

IRIS ACCESSION NUMBER: EW008660

PUBLICATION DATE: JAN 83

TITLE: INFLOW DISTRIBUTION IN WASTEWATER COLLECTION SYSTEMS.

PERSONAL AUTHOR: HOLLENBECK, ALAN J.; NOGAJ, RICHARD J.

DESCRIPTOR: *INFILTRATION; *INFLOW; *MONITORING; *SURVEYS; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 30-33P.

ABSTRACT: IDENTIFICATION AND REDUCTION OF EXCESSIVE FLOW IN SEWER SYSTEMS IS A COMPLEX PROBLEM JUST BEGINNING TO BE UNDERSTOOD BY THE TECHNICAL COMMUNITY. REPORTED ARE THE RESULTS OF PREDICTED AND ACTUAL I/I REDUCTION FOR SEVERAL MUNICIPALITIES. RESULTS OF DIFFERENT MONITORING REPORTS ARE DISCUSSED.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N1

IRIS ACCESSION NUMBER: EW008661

PUBLICATION DATE: JAN 83

TITLE: SETTING UP A SIMPLIFIED P-M PROGRAM.

PERSONAL AUTHOR: THOMPSON, WILLIAM B.

DESCRIPTOR: EQUIPMENT; *MAINTENANCE; *PREVENTIVE MAINTENANCE; *PROGRAM REVIEWS; *RECORDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 33-35P.

ABSTRACT: THOUGHTFUL, CAREFUL PREPARATION CAN BE THE SECRET TO SUCCESS OF ANY PREVENTIVE MAINTENANCE PROGRAM. DESCRIBED IS A SIMPLIFIED PREVENTIVE MAINTENANCE PROGRAM.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N1

IRIS ACCESSION NUMBER: EW008662

PUBLICATION DATE: JAN 83

TITLE: SEATTLE SLUDGE AND SILVICULTURE.

PERSONAL AUTHOR: NICHOLS, CHARLES

DESCRIPTOR: *LAND APPLICATION; LUMBER; *RESEARCH; *SEATTLE; *SLUDGE; *SILVICULTURE; *WASHINGTON; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WOOD

DESCRIPTIVE NOTE: 36-37P.

ABSTRACT: SPURRED BY PROMISING RESULTS FROM SLUDGE APPLICATION TESTING ON TIMBER PLANTATIONS, A LARGE WATER POLLUTION CONTROL AUTHORITY ACQUIRED A VEHICLE WITH SPECIAL SPRAYING CAPABILITIES TO EXPAND THE PROJECT.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N1

IRIS ACCESSION NUMBER: EW008663

PUBLICATION DATE: FEB 83

TITLE: DEVELOPMENT OF A REGIONAL SLUDGE DEWATERING FACILITY USING PRESSURE FILTERS.

PERSONAL AUTHOR: SHIMP, GARY F.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *COLORADO; *DEWATERING; ECONOMIC FACTORS; *FILTERS; *MANAGEMENT; *PLANNING; REGIONAL SYSTEMS; RESEARCH REPORTS; *SLUDGE; *SLUDGE MANAGEMENT; *WASTE DISPOSAL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 130-135P.

ABSTRACT: SLUDGE HANDLING AND DISPOSAL OFTEN MAY BE MORE EFFICIENT AND LESS COSTLY ON A REGIONAL RATHER THAN INDIVIDUAL TREATMENT PLANT BASIS. A REGIONAL PLAN FOR SLUDGE MANAGEMENT WAS DEVELOPED IN A MOUNTAIN AREA OF CENTRAL COLORADO. AEROBICALLY DIGESTED BIOLOGICAL AND CHEMICAL SLUDGE ARE TRUCKED FROM FIVE SMALL MUNICIPAL TREATMENT PLANTS TO A CENTRAL DEWATERING FACILITY. SLUDGE CAKE IS TO BE USED FOR DISTURBED LAND RECLAMATION, FERTILIZATION OF WILD GAME RANGELANDS, OR OTHER BENEFICIAL USES. AN INTERGOVERNMENTAL AGREEMENT BETWEEN THE USER ENTITIES PERMITTED THE COUNTY GOVERNMENT TO ISSUE REVENUE BONDS FOR THE LOCAL SHARE OF THE DEWATERING FACILITY CONSTRUCTION. A USER FEE SYSTEM HAS BEEN DEVELOPED THAT CONSISTS OF A BASE FEE, A GALLONAGE CHARGE, AND A SOLIDS LOADING CHARGE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N2

IRIS ACCESSION NUMBER: EW008664

PUBLICATION DATE: FEB 83

TITLE: MAGNESIUM RECYCLING BY CARBONATION AND CENTRIFUGATION OF HIGH-LIME WASTEWATER SLUDGE.

PERSONAL AUTHOR: IDELOVITCH, EMANUEL; WACHS, ALBERTO M.

DESCRIPTOR: *CARBONATION; *CASE STUDIES; *CENTRIFUGATION; DEWATERING; *LIME; *MAGNESIUM; *PERFORMANCE EVALUATION; *RECYCLING; *RESEARCH REPORTS; *SLUDGE; SLUDGE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 136-144P.

ABSTRACT: BY BUBBLING CO2 INTO WASTEWATER LIME SLUDGE, IT IS POSSIBLE TO DISSOLVE THE MAGNESIUM SELECTIVELY (WITHOUT DISSOLVING THE CALCIUM). BY LOWERING THE SLUDGE PH TO ABOUT 9, ABOUT 35 TO 40% OF THE MAGNESIUM FOUND IN THE SLUDGE AS MG(OH)2 IS DISSOLVED TO AN ADMIXTURE OF MGCO3 AND MG(HCO3)2; BY LOWERING THE PH TO ABOUT 8, THE MG DISSOLUTION EFFICIENCY

IS INCREASED TO 50 TO 60% AND ALL THE DISSOLVED MG IS FOUND AS $MG(HCO_3)_2$. DISSOLUTION OF UNDESIRABLE MATERIALS, SUCH AS ORGANICS, PHOSPHORUS, OR HEAVY METALS, DOES NOT OCCUR TO ANY SIGNIFICANT EXTENT. BORON, WHICH IS ADSORBED ON THE $MG(OH)_2$ PRECIPITATE, IS NOT RELEASED WHEN PH IS LOWERED TO 9; HOWEVER, WHEN PH IS LOWERED FROM 9 TO 8, A CONSIDERABLE DISSOLUTION OF BORON OCCURS. AFTER DISSOLUTION OF MAGNESIUM, THE SLUDGE CAN BE DEWATERED BY SOLID-BOWL DECANTERS, WITH POLYELECTROLITE ADDITION. THE CENTRATE CONTAINING THE DISSOLVED MG CAN BE RECYCLED TO THE LIME TREATMENT UNIT, WITHOUT ANY SIGNIFICANT DANGER OF ACCUMULATION OF UNDESIRABLE SUBSTANCES. DISSOLUTION OF $MG(OH)_2$ FROM THE SLUDGE IMPROVES ITS DEWATERING BY INCREASING THE MAXIMUM LOAD ON THE CENTRIFUGE, REDUCING THE POLYELECTROLITE CONSUMPTION, AND ENSURING A CAKE OF HIGHER SOLIDS CONCENTRATION. MAGNESIUM DISSOLUTION TO PH9 IS PREFERABLE FROM ALL POINTS OF VIEW OVER DISSOLUTION TO PH 8.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N2

IRIS ACCESSION NUMBER: EW008665

PUBLICATION DATE: FEB 83

TITLE: FINE-COAL-AIDED CENTRIFUGAL DEWATERING OF WASTE ACTIVATED SLUDGE.

PERSONAL AUTHOR: ALBERTSON, ORRIS E.; KOPPER, MICHAEL

DESCRIPTOR: *ACTIVATED SLUDGE; *CASE STUDIES; *CENTRIFIUGATION; *COMBUSTION; COAL; *DEWATERING; *INCINERATION; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 145-156P.

ABSTRACT: THE DEWATERING CHARACTERISTICS OF EXCESS BIOLOGICAL SOLIDS HAVE PROVEN TO BE THE MAJOR RESTRAINT TO THE USE OF COMBUSTION AS AN ULTIMATE DISPOSAL ALTERNATIVE. IN THIS FULL-SCALE FIELD STUDY, A NEW TYPE SLOW-SPEED, CO-CURRENT SCROLL CENTRIFUGE WAS FED 100% WASTE ACTIVATED SLUDGE MIXED WITH VARYING QUANTITIES OF FINE COAL WITH THE OBJECTIVE OF PRODUCING A SELF-SUSTAINING CAKE. THE PAPER PRESENTS THE RESULTS OF ABOUT 80 CENTRIFUGE RUNS THAT OPTIMIZE MACHINE AND PROCESS VARIABLES, AND DEFINES THE IMPACT OF USING FINE COAL AS A DEWATERING AID.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N2

IRIS ACCESSION NUMBER: EW008666

PUBLICATION DATE: FEB 83

TITLE: REMOVAL MECHANISMS FOR TOXIC PRIORITY POLLUTANTS.

PERSONAL AUTHOR: KINCANNON, DON F.; AND OTHERS

DESCRIPTOR: *BATCH PROCESSES; *BIOLOGICAL TREATMENT; *CONTINUOUS FLOW; *OZONATION; *POLLUTANTS; *PRIORITY POLLUTANTS; *REACTORS; *RESEARCH REPORTS; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 157-163P.

ABSTRACT: THIS PAPER DESCRIBES STUDIES CONDUCTED IN COMPLETE-MIX, CONTINUOUS-FLOW REACTORS, BATCH REACTORS, AND OZONATION OF WASTEWATER PRIOR TO BIOLOGICAL TREATMENT. FIFTEEN DIFFERENT TOXIC PRIORITY POLLUTANTS WERE STUDIED IN CONTINUOUS-FLOW REACTORS. IN ADDITION TO THE CONTINUOUS-FLOW STUDIES, ACRYLONITRILE, 1,2-DICHLOROPROPANE, 2,4-DINITROPHENOL, AND PHENOL ALSO WERE STUDIED IN BATCH REACTORS AND OZONATED BEFORE BIOLOGICAL TREATMENT. IT WAS FOUND THAT PRIORITY POLLUTANTS CAN BE REMOVED BY SEVERAL MECHANISMS, THE MOST IMPORTANT MECHANISMS BEING STRIPPING, BIODEGRADATION, AND A COMBINATION OF STRIPPING AND BIODEGRADATION. THE REMOVAL MECHANISM WAS FOUND TO BE CONSISTENT WITH THE CLASSIFICATION OF THE CHEMICAL. IN GENERAL, NITROGEN COMPOUNDS, PHENOLS, AND OXYGENATED COMPOUNDS WERE REMOVED BY BIODEGRADATION. AROMATICS WERE REMOVED BY A COMBINATION OF STRIPPING AND BIODEGRADATION. HALOGENATED HYDROCARBONS GENERALLY WERE REMOVED BY STRIPPING. THERE WERE SOME EXCEPTIONS. IT WAS ALSO FOUND THAT THE REMOVAL OF SPECIFIC ORGANIC COMPOUNDS DURING BIOLOGICAL TREATMENT CAN BE SIGNIFICANTLY IMPACTED BY TREATMENT WITH OZONE PRIOR TO BIOLOGICAL TREATMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N2

IRIS ACCESSION NUMBER: EW008667

PUBLICATION DATE: FEB 83

TITLE: ENUMERATION OF CHLORINE-DAMAGED FECAL COLIFORMS IN WASTEWATER EFFLUENTS.

PERSONAL AUTHOR: GRAHAM, PARRIE J.; BRENNIMAN, GARY R.

DESCRIPTOR: *CHLORINATION; CHLORINE; COLIFORMS; EFFLUENTS; *FECAL COLIFORMS; *FILTRATION; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 164-169P.

ABSTRACT: EFFLUENT SAMPLES COLLECTED ON 16 DIFFERENT OCCASIONS AT FOUR SITES WITHIN A WASTEWATER TREATMENT PLANT WERE USED TO DETERMINE WHETHER THE SINGLE VARIABLE OF MEDIA ENRICHMENT SPECIFICALLY IMPROVES THE MEMBRANE FILTRATION (MF) RECOVERY RATES OF CHLORINE-DAMAGED FECAL COLIFORMS (FC). THE ENRICHMENT MEDIA USED IN THIS STUDY ($P=0.03$) SIGNIFICANTLY IMPROVED THE MF RECOVERY RATES FOR FECAL COLIFORMS. HOWEVER, THE STUDY COULD NOT DEMONSTRATE THAT ENRICHMENT SPECIFICALLY IMPROVED THE MF RECOVERY RATES OF CHLORINE-DAMAGED CELLS. THIS STUDY ALSO FOUND A SIGNIFICANT ($P=0.03$) POSTCHLORINATION INCREASE IN FC AFTER A CHLORINE CONTACT PERIOD OF APPROXIMATELY 1 HOUR, FOLLOWED BY A DECREASE IN FC AFTER AN ADDITIONAL 1.5 HOURS OF CHLORINE CONTACT TIME. THIS VARIABILITY IN THE POSTCHLORINATION FC CONCENTRATION IS OF CONCERN BECAUSE IT COULD BE A FACTOR IN DETERMINING WHETHER A WASTEWATER TREATMENT PLANT IS IN

COMPLIANCE WITH STATE OR LOCAL BACTERIAL EFFLUENT STANDARDS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N2

IRIS ACCESSION NUMBER: EW008668

PUBLICATION DATE: FEB 83

TITLE: EVALUATION OF A DISSOLVED OXYGEN FIELD TEST PROTOCOL.

PERSONAL AUTHOR: KULIN, GERSHON; AND OTHERS

DESCRIPTOR: ACTIVATED SLUDGE; *CASE STUDIES; *DISSOLVED OXYGEN; *INSTRUMENTATION; *MAINTENANCE; *MONITORING; *OXYGEN METERS; *PERFORMANCE EVALUATION

DESCRIPTIVE NOTE: 178-186P.

ABSTRACT: A TEST PROTOCOL THAT WAS DEVELOPED FOR ON-LINE DISSOLVED OXYGEN METERS WAS EVALUATED IN A 60-DAY FIELD TEST CONDUCTED IN AN ACTIVATED SLUDGE AERATION BASIN WITH 13 METERS FROM 7 COOPERATING MANUFACTURERS. THE PAPER DISCUSSES THE IMPORTANT FEATURES OF THE TEST PROTOCOL AND DESCRIBES THE PROCEDURES AND RESULTS OF THE FIELD TEST. THESE RESULTS PROVIDE INFORMATION ON METHODS FOR TESTING, CALIBRATING AND PERFORMANCE MONITORING, INFORMATION USEFUL FOR DEVELOPING SPECIFICATIONS, AND INFORMATION ON ROUTINE MAINTENANCE FOR ON-LINE DISSOLVED OXYGEN METERS IN A SPECIFIC PLANT ENVIRONMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N2

IRIS ACCESSION NUMBER: EW008669

PUBLICATION DATE: FEB 83

TITLE: ASSESSMENT OF HEAVY METALS AND PCBS AT SLUDGE APPLICATION SITES.

PERSONAL AUTHOR: WEBBER, MELVIN D.; AND OTHERS

DESCRIPTOR: *CANADA; *CASE STUDIES; *HEAVY METALS; *LAND APPLICATION; *POLYCHLORINATED BIPHENYLS; *RESEARCH REPORTS; *SAMPLING; *SLUDGE; SOIL; *WASTE DISPOSAL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 187-195P.

ABSTRACT: SOILS AND PLANT MATERIALS WERE SAMPLED AT 10 SLUDGE APPLICATION SITES IN ONTARIO AND WERE ANALYZED FOR HEAVY METALS AND POLYCHLORINATED BIPHENYLS (PCBS). IN GENERAL, SLUDGE APPLICATION INCREASED THE TOTAL METAL AND PCB CONTENTS OF RECEIVING SOILS, AND THE LARGEST INCREASES USUALLY COINCIDED WITH THE LARGEST ESTIMATED LOADINGS. METALS EXTRACTED BY DIETHYLENETRIAMINE-PENTAACETIC ACID (DTPA) IN THE RECEIVING SOILS WERE ALSO INCREASED AND WERE WELL CORRELATED WITH THE TOTAL METALS. RESULTS OF THESE STUDIES INDICATED THAT SLUDGE APPLICATION ACCORDING TO ONTARIO GUIDELINES WILL NOT CAUSE DELETERIOUS UPTAKE OF HEAVY METALS BY FIELD CROPS. IT SEEMED THAT THE GUIDELINES ALLOW AN APPRECIABLE SAFETY MARGIN, WHICH IS DESIRABLE BECAUSE SLUDGE COMPOSITION MAY VARY WIDELY WITH TIME.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N2

IRIS ACCESSION NUMBER: EW008670

PUBLICATION DATE: FEB 83

TITLE: USING WATER DISTRIBUTION SYSTEM MODELS.

PERSONAL AUTHOR: WALSKI, THOMAS M.

DESCRIPTOR: *COMPUTER PROGRAMS; DATA COLLECTION; *GUIDES; HYDRAULICS; *MATHEMATICAL MODELS; *MODELING; *PROGRAM DESCRIPTIONS; *RECOMMENDATIONS; *WATER SUPPLY; *WATER DISTRIBUTION; WATER MANAGEMENT; WATER RESOURCES

DESCRIPTIVE NOTE: 58-63P.

ABSTRACT: THIS ARTICLE IS A "USER GUIDE" FOR MODELING WATER DISTRIBUTION SYSTEMS. PRACTICAL SUGGESTIONS ARE GIVEN FOR SELECTING THE PROGRAM, COMPILING DATA FOR INPUT, CODING DATA FOR THE MODEL, COLLECTING CALIBRATION DATA, CALIBRATING THE MODEL, AND RUNNING THE MODEL. READERS ARE ALSO PROVIDED WITH A REFERENCE LIST OF PUBLISHED LITERATURE ON MODELING WATER DISTRIBUTION SYSTEMS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008671

PUBLICATION DATE: FEB 83

TITLE: DEVELOPING AND MONITORING MUNICIPAL GROUNDWATER SUPPLIES IN FLORIDA.

PERSONAL AUTHOR: HEATH, GENE

DESCRIPTOR: AQUIFERS; *CASE STUDIES; CLIMATE; *FLORIDA; *GROUNDWATER; MANAGEMENT; *MONITORING; MUNICIPALITIES; *PLANNING; *WATER RESOURCES; *WATER SUPPLY; *WELLS

DESCRIPTIVE NOTE: 64-67P.

ABSTRACT: WATER DEMANDS ON THE WEST COAST OF FLORIDA HAVE RISEN STEADILY BECAUSE OF THE RAPID INCREASE IN PERMANENT RESIDENTS AND A SUBSTANTIAL SEASONAL TEMPORARY POPULATION. VARYING SEASONAL DEMAND PATTERNS STRONGLY INFLUENCE GROUNDWATER WITHDRAWAL RATES AND RELATED EFFECTS ON THE GROUNDWATER SOURCES OF MUNICIPAL SUPPLIES. THE PROCESS OF PLANNING, DEVELOPING, AND MONITORING A NEW WELLFIELD IS DISCUSSED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008672

PUBLICATION DATE: FEB 83

TITLE: HIDDEN COSTS OF ACCIDENTS CAN FINANCE SAFETY PROGRAMS.

PERSONAL AUTHOR: VAN DYKE, ROBERT P.

DESCRIPTOR: *ACCIDENT PREVENTION; ACCIDENTS; *COST EFFECTIVENESS; *COSTS; *ECONOMIC FACTORS; *FLORIDA; *MANAGEMENT; *SAFETY; *SAFETY PROGRAMS; *WATER INDUSTRY; WORK ENVIRONMENT

DESCRIPTIVE NOTE: 73-77P.

ABSTRACT: MANAGEMENT'S COMMITMENT TO ACCIDENT PREVENTION PROGRAMS IS ESSENTIAL FOR WORKER HEALTH AND MORALE. THE NUMBER AND THE COST OF ACCIDENTS THAT OCCUR IN THE WATER INDUSTRY EXCEED THE FIGURES FOR INDUSTRY AS A WHOLE, AND THESE COSTS CONTINUE TO RISE. APART FROM THE DIRECT EXPENSES NORMALLY CONNECTED WITH WORKER INJURIES ARE THE HIDDEN COSTS-TRAINING NEW WORKERS, SUPERVISORS' TIME SPENT IN COPING WITH THE ACCIDENTS, CLAIMS RESULTING FROM ACCIDENTS, LEGAL FEES, AND OTHERS. SUCH COSTS ARE FAR GREATER THAN THE COSTS OF SAFETY TRAINING PROGRAMS THAT HAVE PROVED EFFECTIVE IN REDUCING THE NUMBER AND SEVERITY OF ON-THE-JOB INJURIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008673

PUBLICATION DATE: FEB 83

TITLE: PRINCIPLES OF INTERNAL CORROSION AND CORROSION MONITORING.

PERSONAL AUTHOR: KIRMEYER, GREGORY J.; LOGSDON, GARY S.

DESCRIPTOR: *CORROSION; EQUIPMENT; INTERNAL CORROSION; *MAINTENANCE; *MONITORING; *PIPES; *PREVENTIVE MAINTENANCE; *PROGRAM DESCRIPTIONS; *RESEARCH REPORTS; *WATER SUPPLY; *WATER DISTRIBUTION; *WATER TREATMENT

DESCRIPTIVE NOTE: 78-83P.

ABSTRACT: INTERACTION OF CORROSIVE WATER WITH DISTRIBUTION PIPELINES AND HOME PLUMBING SYSTEMS CAN CAUSE HEALTH-RELATED, AESTHETIC, OR ECONOMIC PROBLEMS. THE AUTHORS OF THIS OVERVIEW DEFINE CORROSION AND DESCRIBE COMMON FORMS OF INTERNAL CORROSION, THE BASIC CORROSION REACTION, AND CORROSION OF IRON PIPE, GALVANIZED PIPE, COPPER PIPE, LEAD PIPE, AND STRUCTURES WITHIN THE WATER TREATMENT PLANT. THEY ALSO CONSIDER METHODS OF MONITORING CORROSION. A STRATEGY FOR CONTROLLING CORROSION DEPENDS ON THE SPECIFIC WATER QUALITY AND DISTRIBUTION SYSTEM, AND ONCE A CORROSION CONTROL PROGRAM IS IMPLEMENTED, ITS EFFECTIVENESS SHOULD BE MONITORED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008674

PUBLICATION DATE: FEB 83

TITLE: THE INTERIOR SURFACE OF GALVANIZED STEEL PIPE: A POTENTIAL FACTOR IN CORROSION RESISTANCE.

PERSONAL AUTHOR: FOX, KATHERINE P.; AND OTHERS

DESCRIPTOR: *CORROSION; EQUIPMENT; *GALVANIZED PIPES; *PERFORMANCE EVALUATION; *PIPES (WATER); *PIPES; *RESEARCH REPORTS; *WATER SUPPLY; *WATER DISTRIBUTION; ZINC COATINGS

DESCRIPTIVE NOTE: 84-86P.

ABSTRACT: AS PART OF AN INVESTIGATION OF PITTING CORROSION INDUCED BY SURFACE HETEROGENEITIES, THE SURFACE CHARACTERISTICS OF PIPE FROM AUSTRALIA, KOREA, AND THE UNITED STATES WERE EXAMINED. THE THICKNESSES OF THE ZINC COATING ON PIPE SAMPLES WERE COMPARED WITH STANDARDS FOR ZINC COATING OF GALVANIZED STEEL PIPE. FOR THE SAMPLES EXAMINED IN THIS STUDY, PIPE FROM BOTH AUSTRALIA AND THE UNITED STATES MET THE COATING STANDARDS, BUT THE PIPE FROM KOREA DID NOT. A PILOT STUDY, WHICH IS BEING CONDUCTED TO DETERMINE WHETHER THESE DIFFERENCES IN PIPE SURFACE LEAD TO DIFFERENCES IN CORROSION, IS DESCRIBED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008675

PUBLICATION DATE: FEB 83

TITLE: CONTROL OF LEAD, COPPER, AND IRON PIPE CORROSION IN BOSTON.

PERSONAL AUTHOR: KARALEKAS, PETER C., JR.; AND OTHERS

DESCRIPTOR: *CASE STUDIES; *CORROSION; *DRINKING WATER; EQUIPMENT; *HEALTH EFFECTS; *LEAD; *METALS; *MASSACHUSETTS; *MONITORING; *PIPES; *PIPES (WATER); *PREVENTIVE MAINTENANCE; *RESEARCH REPORTS; *WATER DISTRIBUTION; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 92-95P.

ABSTRACT: SINCE 1976 A SAMPLING PROGRAM HAS BEEN CONDUCTED IN THE BOSTON, MASS., METROPOLITAN AREA TO MONITOR TRACE METALS AT CONSUMERS' TAPS THAT WERE KNOWN TO BE SUPPLIED THROUGH LEAD SERVICE LINES. THE AUTHORS DISCUSS THE PROBLEMS WITH LEAD IN BOSTON'S DRINKING WATER AND DESCRIBE HISTORIC ASPECTS, THE WATER SUPPLY SYSTEM, A CORROSION MONITORING PROGRAM, AND HEALTH EFFECTS. MONITORING HAS BEEN ESSENTIAL IN EVALUATING THE CORROSION CONTROL SCHEME.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008676

PUBLICATION DATE: FEB 83

TITLE: AN EVALUATION OF THE CALCIUM CARBONATE SATURATION INDEXES.

PERSONAL AUTHOR: ROSSUM, JOHN R.; MERRILL, DOUGLAS T.

DESCRIPTOR: *ALKALINITY; *CALCIUM CARBONATE; *CORROSION; *INDEXES; *MATHEMATICAL MODELS; PERFORMANCE EVALUATION; *PH; *RESEARCH REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: 95-100P.

ABSTRACT: INDEXES BASED ON WATER CHARACTERISTICS SUCH AS PH, ALKALINITY, AND CALCIUM CONCENTRATION HAVE BEEN APPLIED IN CORROSION CONTROL FOR CERTAIN TYPES OF WATER. HOWEVER, THESE INDEXES ARE NOT DIRECT MEASURES OF WATER CORROSIVITY, BUT ARE INDICATORS OF THE TENDENCY OF WATER TO FORM FILMS OF CALCIUM CARBONATE WHICH MAY BE PROTECTIVE. THE AUTHORS OF THIS ARTICLE REPORT ON THE EFFECTIVENESS OF SOME COMMON INDEXES FOR DESCRIBING CONTROLLED DEPOSITION OF CACO3. OF THE INDEXES THEY CONSIDER, CALCIUM CARBONATE PRECIPITATION POTENTIAL IS BEST SUITED TO DESCRIBE CACO3 PRECIPITATION AND DISSOLUTION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008677

PUBLICATION DATE: FEB 83

TITLE: CORROSION STUDY AT CARBONDALE, ILLINOIS.

PERSONAL AUTHOR: SWAYZE, JAMES

DESCRIPTOR: *CASE STUDIES; CAUSTIC SODA; *CORROSION CONTROL; *COSTS; EQUIPMENT; *ILLINOIS; *INHIBITORS; *MAINTENANCE; *PERFORMANCE EVALUATION; PH; *PHOSPHATES; *PREVENTIVE MAINTENANCE; *RESEARCH REPORTS; *WATER SUPPLY

DESCRIPTIVE NOTE: 101-102P.

ABSTRACT: THE CITY OF CARBONDALE HAD BEEN USING CAUSTIC SODA FOR PH CONTROL BUT SWITCHED TO A CORROSION AND SCALE INHIBITOR FOR CORROSION CONTROL. RESULTS FROM COUPON TESTS, A CORRATOR PROBE, AND WATER ANALYSES CONFIRMED THE EFFECTIVENESS OF THE INHIBITOR, WHICH WAS ALSO CREDITED WITH DECREASED CHEMICAL COSTS, IMPROVED SAFETY CONDITIONS, AND REDUCED MAINTENANCE OF EQUIPMENT.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008678

PUBLICATION DATE: FEB 83

TITLE: SMALL UTILITY SCORES BIG SUCCESS, RECLAIMS HALF ITS CONTAMINATED WATER SUPPLY.

DESCRIPTOR: *CASE STUDIES; *CONTAMINATION; EQUIPMENT; HAZARDOUS MATERIALS; *PERFORMANCE EVALUATION; *PENNSYLVANIA; REGULATIONS; *TRICHLOROETHYLENE; *WATER CONSERVATION; *WATER QUALITY; *WATER RECLAMATION; WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 18, 20 NEWSP.

ABSTRACT: THIS ARTICLE EXAMINES HOW THE WARRINGTON TOWNSHIP (PENNSYLVANIA) MUNICIPAL AUTHORITY DEALT WITH A WATER SUPPLY CONTAMINATED WITH TRICHLOROETHYLENE (TCE). TO COPE WITH THE PROBLEM OF A WATER SHORTFALL CAUSED BY CLOSED WELLS, THE WATER UTILITY TOOK THREE COURSES OF ACTION: (1) IT INSTITUTED A STRONG WATER CONSERVATION PROGRAM, (2) IT CONSTRUCTED A TIE-IN TO THE WATER SYSTEM OF A NEIGHBORING COMMUNITY, AND (3) IT DRILLED A TEST WELL THAT SHOWED GOOD YIELD, PROMPTING THE UTILITY TO APPLY TO REGULATORY AGENCIES FOR PERMISSION TO DEVELOP THE SOURCE. THE UTILITY WATER ADDED A WATER RECLAMATION SYSTEM TO MEET INCREASED NEEDS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008679

PUBLICATION DATE: FEB 83

TITLE: NEWS OF THE FIELD.

DESCRIPTOR: AQUIFERS; ECONOMIC FACTORS; *MANAGEMENT; MARKETING; MICROBIOLOGY; PLUME MANAGEMENT; *TECHNOLOGICAL ADVANCEMENTS; *WATER RESOURCES; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 32-37 NEWSP.

ABSTRACT: THIS ARTICLE PRESENTS A BRIEF REVIEW OF THE LATEST NEWS IN THE AREA OF WATER RESOURCES. TOPICS INCLUDE: MARKETING IN WATER SERVICE COMPANIES, PLUME MANAGEMENT, WATER SYSTEM CAPITAL SPENDING, UTILITIES EXECUTIVE SALARIES, MICROBIOLOGICAL WATER PURIFIER REQUIREMENTS, AND BUSINESS NEWS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N2

IRIS ACCESSION NUMBER: EW008680

PUBLICATION DATE: FEB 83

TITLE: TOTAL WATER MANAGEMENT--THE DENVER STORY.

PERSONAL AUTHOR: MILLER, KENNETH J.

DESCRIPTOR: *COLORADO; *CONSERVATION; *DRINKING WATER; *IRRIGATION; *MANAGEMENT; *RECYCLING; *WATER REUSE; *WATER TREATMENT; *WATER SUPPLY; *WATER MANAGEMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 38-39P.

ABSTRACT: WATER RECLAMATION PROJECTS ACCOMPANY DEVELOPMENT OF NEW SUPPLIES IN DENVER'S WATER MANAGEMENT PHILOSOPHY. A NUMBER OF THE PROJECTS ARE DESCRIBED.

AVAILABILITY: PUBLIC WORKS; V114 N2

IRIS ACCESSION NUMBER: EW008681

PUBLICATION DATE: FEB 83

TITLE: ENVIRONMENTAL AND SEISMIC CONSIDERATIONS FOR SAN FRANCISCO'S OCEAN OUTFALL.

PERSONAL AUTHOR: MURPHY, GEORGE; LASK, ELLEN

DESCRIPTOR: *CALIFORNIA; *DESIGN; EFFLUENTS; *EARTHQUAKES; *OCEAN OUTFALLS; *SEISMIC CONSIDERATIONS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 40-42P.

ABSTRACT: A NEW WASTEWATER OUTFALL STRETCHING 4.5 MILES INTO THE PACIFIC OCEAN WAS DESIGNED WITH SEISMIC CONSIDERATIONS IN MIND. DESCRIBED IS THE DESIGN AND CONSTRUCTION.

AVAILABILITY: PUBLIC WORKS; V114 N2

IRIS ACCESSION NUMBER: EW008682

PUBLICATION DATE: FEB 83

TITLE: ON-SITE DETENTION - DESIGN EXAMPLE.

PERSONAL AUTHOR: MASON, JOHN M.; RHOMBERG, EDWARD J.

DESCRIPTOR: *DESIGN; *DETENTION BASINS; *ONSITE DETENTION; *STORM SEWERS; *SURFACE RUNOFF; *URBAN AREAS

DESCRIPTIVE NOTE: 48-52P.

ABSTRACT: A STEP-BY-STEP DESIGN PROCEDURE FOR REGULATION OF RUNOFF FROM A DETENTION FACILITY CONSIDERS THE RUNOFF HYDROGRAPH, DETERMINATION OF BASIN SIZE, OUTLET CONTROL STRUCTURE, AND OTHER FACTORS.

AVAILABILITY: PUBLIC WORKS; V114 N2

IRIS ACCESSION NUMBER: EW008683

PUBLICATION DATE: FEB 83

TITLE: BEATING RED TAPE--DESIGN TO INSTALLATION IN SIX MONTHS.

PERSONAL AUTHOR: MORIARTY, WILLIAM B.; CADIGAN, WILLIAM J.

DESCRIPTOR: *DESIGN; *CONSTRUCTION; *INDIANA; *PLANNING; *SEWERS; *WASTEWATER COLLECTION; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 52-55P.

ABSTRACT: A NEW OUTLET SEWER FROM A PUMPING STATION WAS COMPLETED IN A VERY TIGHT TIME FRAME DESPITE NUMEROUS OBSTACLES ALONG THE ROUTE. DESIGN AND CONSTRUCTION OF THE SEWER IS DISCUSSED.

AVAILABILITY: PUBLIC WORKS; V114 N2

IRIS ACCESSION NUMBER: EW008684

PUBLICATION DATE: FEB 83

TITLE: SALT WATER FOR FIRE PROTECTION AND SANITATION - A WATER CONSERVATION ALTERNATIVE.

PERSONAL AUTHOR: JINKENS, DAVID M.

DESCRIPTOR: *WATER CONSERVATION; *CONSERVATION; *DUAL SYSTEMS; *SALT WATER; *WATER MANAGEMENT; *WATER DISTRIBUTION; *WATER RESOURCES; *WATER SUPPLY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 66-67P.

ABSTRACT: A SALT WATER DISTRIBUTION SYSTEM CUTS FRESH WATER DEMAND BY 40 PERCENT IN AVALON, A COMMUNITY ON SANTA CATALINA ISLAND IN CALIFORNIA.

AVAILABILITY: PUBLIC WORKS; V114 N2

IRIS ACCESSION NUMBER: EW008685

PUBLICATION DATE: FEB 83

TITLE: WASTE COMPOSTING EASES SEWAGE SLUDGE DISPOSAL PROBLEMS.

PERSONAL AUTHOR: VEILLETTE, RAYMOND J.

DESCRIPTOR: *COMPOSTING; *COMPOST; *ECONOMICS; *LANDFILLS; *LEAF DISPOSAL; *SLUDGE; *SLUDGE DISPOSAL; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 35-36P.

ABSTRACT: A SUCCESSFUL TWO-YEAR-OLD PROGRAM OF COMPOSTING DIGESTED SEWAGE SLUDGE WITH LEAVES AND BRUSH MAY BE EXPANDED

TO INCLUDE CATCH BASIN GRITS.

AVAILABILITY: AMERICAN CITY & COUNTY; V98 N2

IRIS ACCESSION NUMBER: EW008690

PUBLICATION DATE: 80

TITLE: WORKSHOPS ON ENFORCEMENT OF STATE PUBLIC WATER SUPPLY PROGRAMS.

DESCRIPTOR: *ENFORCEMENT; *GRANTS; *PROGRAM DEVELOPMENT; *PROGRAM ENFORCEMENT; PUBLIC HEALTH; SANITARY ENGINEERS; *SEMINARS; STATE AGENCIES; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 274P.

ABSTRACT: THIS PUBLICATION CONTAINS MATERIAL ON ENFORCEMENT OF STATE PUBLIC WATER SUPPLY PROGRAMS. INFORMATION IS PRESENTED ON A GRANT TO THE CONFERENCE OF STATE SANITARY ENGINEERS TO DEVELOP AND CONDUCT THREE SEMINARS ON ENFORCEMENT PROGRAMS. THE FIRST PART OF THE REPORT OUTLINES THE GOALS AND OBJECTIVES OF THE GRANT, THE GRANT'S DEVELOPMENT, CONDUCT, ACCOMPLISHMENTS, PARTICIPANT EVALUATION DATA, AND RECOMMENDATIONS. THE SECOND PART OF THE REPORT OFFERS A SUMMARY OF THE INFORMATION EXCHANGED AND PROBLEMS DISCUSSED BY STATE PROGRAM PARTICIPANTS AT THE SEMINARS.

AVAILABILITY: MEREDITH H. THOMPSON, DIRECTOR, TRAINING, EDUCATION AND PUBLICATION, 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW008692

PUBLICATION DATE: JAN 82

TITLE: MECHANISMS OF STATE AGENCIES PROVIDING WATER SYSTEMS ASSISTANCE.

DESCRIPTOR: *DRINKING WATER; ECONOMIC FACTORS; *MANAGEMENT; MARYLAND; NEW YORK; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *PROGRAM DESCRIPTIONS; *SERVICE DELIVERY; *STATE AGENCIES; WASHINGTON; *WATER QUALITY; *WATER RESOURCES; *WATER SYSTEMS

DESCRIPTIVE NOTE: 53P.

ABSTRACT: THIS STUDY EXAMINES EXISTING SERVICE DELIVERY MECHANISMS AND THEIR EFFECTIVENESS IN ADDRESSING PROBLEMS OF SMALL WATER SYSTEMS. ATTENTION IS FOCUSED ON THE RESULTS OF AN EVALUATION OF THREE EXISTING MECHANISMS IN THE STATES OF MARYLAND, NEW YORK, AND WASHINGTON. INCLUDED IS INFORMATION ON ORGANIZATIONAL STRUCTURE, LEGISLATIVE MANDATES, OPERATIONS, MANAGEMENT, AND FUNDING.

AVAILABILITY: MEREDITH H. THOMPSON, DIRECTOR, TRAINING, EDUCATION AND PUBLICATION, 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW008693

PUBLICATION DATE: FEB 79

TITLE: TRAINEE'S MANUAL FOR THE TRAINING COURSE - SANITARY ENGINEERS.

DESCRIPTOR: *DRINKING WATER; ENGINEERING; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WATER); *POST SECONDARY EDUCATION; *STUDY GUIDES; TRAINING PROGRAMS; *WATER DISTRIBUTION; WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 200P.

ABSTRACT: THIS TRAINEE'S MANUAL COVERS MATERIAL PRESENTED IN THE COURSE ENTITLED "CONDUCT OF A SMALL WATER SUPPLY SANITARY SURVEY". THE OVERALL OBJECTIVE OF THIS COURSE IS TO PROVIDE THE TRAINING WHICH, WHEN COMPLEMENTED BY THE MINIMUM AMOUNT OF ON-THE-JOB TRAINING, WILL ENABLE THE TRAINEE TO PERFORM SATISFACTORY SURVEYS OF SMALL WATER SUPPLY SYSTEMS.

AVAILABILITY: MEREDITH H. THOMPSON, DIRECTOR, TRAINING, EDUCATION AND PUBLICATION, 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW008694

PUBLICATION DATE: FEB 79

TITLE: INSTRUCTOR'S MANUAL FOR THE TRAINING COURSE - SANITARY ENGINEERS.

DESCRIPTOR: *DRINKING WATER; ENGINEERING; *INSTRUCTIONAL MATERIALS; MANUALS; *OPERATIONS (WATER); *POST SECONDARY EDUCATION; *TEACHING GUIDES; *TRAINING PROGRAMS; *WATER DISTRIBUTION; WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 250P.

ABSTRACT: THE PURPOSE OF THIS INSTRUCTOR'S MANUAL IS TO SERVE AS A COMPLETE GUIDE TO: (1) THE COURSE ENTITLED "CONDUCT OF A SMALL WATER SUPPLY SANITARY SURVEY", (2) THE RECOMMENDED UNITS AND LESSONS WITHIN THE COURSE, (3) THE CONTENT AND ORGANIZATION OF THE LESSONS, (4) HOW TO PREPARE FOR THE LESSONS, (5) RECOMMENDATIONS ON PRESENTING THE UNITS, AND (6) THE PARTICIPANT'S HANDBOOK AND ITS USE.

AVAILABILITY: MEREDITH H. THOMPSON, DIRECTOR, TRAINING, EDUCATION AND PUBLICATION 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW008696

PUBLICATION DATE: 79

TITLE: PROCEEDINGS FROM THE 54TH MEETING CONFERENCE OF STATE SANITARY ENGINEERS, DENVER, CO. MAY 8-10, 1979.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *ENGINEERING; PUBLIC HEALTH; RADIOACTIVE WASTES; *RESEARCH REPORTS; *SANITARY ENGINEERS; TECHNOLOGICAL ADVANCES; *WATER TREATMENT; WASTE

DISPOSAL; *WASTEWATER TREATMENT; *WATER QUALITY; WATER RESOURCES

ABSTRACT: THIS PUBLICATION CONTAINS THE PROCEEDINGS OF THE 54TH MEETING OF STATE SANITARY ENGINEERS HELD MAY 8-10, 1979, IN DENVER, COLORADO. TOPICS ADDRESSED INCLUDE: ENVIRONMENTAL PROTECTION AND QUALITY, NON-POINT SOURCE POLLUTION, RADIOACTIVE WASTE MANAGEMENT, TECHNOLOGICAL ADVANCEMENTS, PERSONNEL AND TRAINING, WATER TREATMENT AND SUPPLY, PUBLIC HEALTH, AND WASTEWATER TREATMENT.

AVAILABILITY: MEREDITH H. THOMPSON, DIRECTOR, TRAINING, EDUCATION AND PUBLICATION, 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW008697

PUBLICATION DATE: 81

TITLE: PROCEEDINGS FROM THE 56TH ANNUAL MEETING OF THE CONFERENCE OF STATE SANITARY ENGINEERS AT ANN ARBOR, MI. MAY 3-7, 1981.

DESCRIPTOR: AIR QUALITY; *CONFERENCE PROCEEDINGS; *DRINKING WATER; *ENGINEERING; *ENVIRONMENTAL QUALITY; *PUBLIC HEALTH; *REGULATIONS; *SANITARY ENGINEERS; SOLID WASTES; *STANDARDS; SLUDGE; *WATER TREATMENT; *WASTEWATER TREATMENT; *WATER QUALITY; *WATER RESOURCES

ABSTRACT: THIS PUBLICATION CONTAINS THE PROCEEDINGS OF THE 56TH ANNUAL CONFERENCE OF STATE SANITARY ENGINEERS HELD MAY 3-7, 1981, IN ANN ARBOR MICHIGAN. TOPICS ADDRESSED INCLUDE: WATER QUALITY, REGULATIONS AND STANDARDS, WASTEWATER, AIR QUALITY, SUPERFUND, DRINKING WATER, SOLID WASTES, ASBESTOS, AND SEWAGE SLUDGE.

AVAILABILITY: MEREDITH H. THOMPSON, DIRECTOR, TRAINING, EDUCATION AND PUBLICATION, 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW008698

PUBLICATION DATE: 82

TITLE: WORKSHOPS ON PROBLEMS RELATING TO THE CONSTRAINTS OF IMPLEMENTING STATE SOLID & HAZARDOUS WASTES PROGRAMS.

DESCRIPTOR: ADMINISTRATION; ENVIRONMENTAL PROTECTION AGENCY; *HAZARDOUS WASTES; MANAGEMENT; PROBLEM SOLVING; *PROGRAM IMPLEMENTATION; *SOLID WASTES; *STATE PROGRAMS; *WASTE DISPOSAL; *WASTE MANAGEMENT; *WORKSHOPS

DESCRIPTIVE NOTE: 70P.

ABSTRACT: THIS PUBLICATION CONTAINS MATERIAL FROM SEVERAL WORKSHOPS ON PROBLEMS RELATING TO THE CONSTRAINTS OF IMPLEMENTING STATE SOLID AND HAZARDOUS WASTES PROGRAMS. THE PURPOSE OF THE WORKSHOPS WAS TO PROVIDE A COMMON MEETING GROUND FOR STATE AND EPA PERSONNEL RESPONSIBLE FOR THE SOLID AND HAZARDOUS WASTES PROGRAMS AND AS THE EXPERTS WITH EVERYDAY PRACTICAL OPERATING EXPERIENCE TO DISCUSS COMPREHENSIVE PROGRAMS AND MUTUAL ADMINISTRATIVE AND OPERATIONAL PROBLEMS.

AVAILABILITY: MEREDITH H. THOMPSON, DIRECTOR, TRAINING, EDUCATION AND PUBLICATION, 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW008700

PUBLICATION DATE: JUL 82

TITLE: LABORATORY PROTOCOLS FOR EVALUATING THE FATE OF ORGANIC CHEMICALS IN AIR AND WATER.

PERSONAL AUTHOR: MILL, T.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AIR QUALITY; *AQUATIC ENVIRONMENTS; BIOTRANSFORMATION; *CHEMICALS; DATA ANALYSIS; HYDROLYSIS; *LABORATORY PROCEDURES; *ORGANIC COMPOUNDS; OXIDATION; PHOTOLYSIS; *RESEARCH REPORTS; VOLATILIZATION; *WATER QUALITY

DESCRIPTIVE NOTE: 329P.

ABSTRACT: LABORATORY TEST PROCEDURES (OR PROTOCOLS) HAVE BEEN DEVELOPED TO PROVIDE DATA USEFUL IN EVALUATING THE ENVIRONMENTAL FATE OF ORGANIC COMPOUNDS IN NATURAL AQUATIC SYSTEMS AND IN THE ATMOSPHERE. SCREENING-LEVEL PROTOCOLS ARE DESCRIBED TO ESTIMATE RATE CONSTANTS FOR HYDROLYSIS, PHOTOLYSIS, OXIDATION, BIOTRANSFORMATION, AND VOLATIZATION PROCESSES IN NATURAL AQUATIC SYSTEMS. FOR EACH PROCESS, THE THEORY AND THE PRESENT STATE OF KNOWLEDGE REGARDING THE ENVIRONMENT ARE REVIEWED; SOME COMMON METHODS CURRENTLY IN USE ARE CRITICALLY EVALUATED.

AVAILABILITY: US ENVIRONMENTAL PROTECTION AGENCY, CENTER FOR ENVIRONMENTAL RESEARCH INFORMATION, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EW008701

PUBLICATION DATE: FEB 83

TITLE: TRAINING ROLE GETS BOOST IN CONTRACT OPERATIONS APPROACH.

PERSONAL AUTHOR: MCELROY, CHARLES W., JR.

DESCRIPTOR: *CONTRACT SERVICES; *CONTRACT OPERATIONS; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; PERFORMANCE EVALUATION; *TRAINING; *TRAINING PROGRAMS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 22-24P.

ABSTRACT: TRAINED OPERATORS ARE ESSENTIAL FOR EFFECTIVE OPERATIONS OF A WASTEWATER TREATMENT PLANT. THIS ARTICLE DISCUSSES THE USE OF CONTRACT OPERATIONS SERVICES AND THE BENEFITS TO THE MUNICIPALITY. THE TRAINING PROGRAM FOR ONE

CONTRACTING FIRM IS DESCRIBED.

AVAILABILITY: WATER ENGINEERINGS 8 MANAGEMENT; V130 N2

IRIS ACCESSION NUMBER: EW008702

PUBLICATION DATE: FEB 83

TITLE: HURRICANE DAMAGE PROMPTS O 8 M PLAN.

PERSONAL AUTHOR: MATTHEWS, DOUGLAS G.

DESCRIPTOR: *DESIGN; *LIFT STATIONS; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PUMPS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 26-28P.

ABSTRACT: DESCRIBED IS THE DEVELOPMENT OF A COMPREHENSIVE OPERATIONS AND MAINTENANCE PROGRAM FOR THE LIFT STATIONS IN THE CORPUS CHRISTI (TEXAS) WASTEWATER COLLECTION SYSTEM.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N2

IRIS ACCESSION NUMBER: EW008703

PUBLICATION DATE: FEB 83

TITLE: SAVE THOSE ROTARY SHAFTS.

PERSONAL AUTHOR: SWEET, FREDERICK M.

DESCRIPTOR: *COSTS; *EQUIPMENT; *MAINTENANCE; *PERFORMANCE EVALUATION; *SPRAY WELDING; *WELDING

DESCRIPTIVE NOTE: 30P.

ABSTRACT: DESCRIBED IS A PROCEDURE CALLED "SPRAY WELDING" FOR REBUILDING WORN PARTS, SUCH AS ROTARY SHAFTS. THE PROCEDURE REDUCES REPLACEMENT OF PARTS, REDUCES COSTS, AND IMPROVES THE OPERATIONS OF SOME EQUIPMENT SURFACES.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N2

IRIS ACCESSION NUMBER: EW008704

PUBLICATION DATE: FEB 83

TITLE: PUBLIC/PRIVATE PARTNERSHIP MEET LOCAL NEEDS.

PERSONAL AUTHOR: GOLDMAN, HARVEY; MOKUVOS, SANDRA

DESCRIPTOR: *BUSINESS ROLE; *COSTS; *CONTRACT OPERATIONS; *GOVERNMENT ROLE; *FACILITIES; *FINANCING; *MANAGEMENT; OPERATIONS (WASTEWATER); *PRIVATE SECTOR OWNERSHIP; *PRIVATIZATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32-35P.

ABSTRACT: DESCRIBED ARE PRIVATIZATION APPROACHES FOR PROVIDING COST-EFFECTIVE WASTEWATER TREATMENT WITHOUT TYING UP GOVERNMENTAL RESOURCES. ADVANTAGES TO THE BUSINESS FIRM AND TO THE MUNICIPALITY ARE DISCUSSED.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N2

IRIS ACCESSION NUMBER: EW008706

PUBLICATION DATE: FEB 83

TITLE: ANALYST'S NOTEBOOK: FOURIER TRANSFORM SPECTROSCOPY.

PERSONAL AUTHOR: CLARK, DOUGLAS W.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CONTAMINANTS; *FOURIER TRANSFORM SPECTROSCOPY; *LABORATORY TECHNIQUES; *SPECTROSCOPY; *TECHNOLOGY; *WASTEWATER ANALYSIS; *WATER QUALITY

DESCRIPTIVE NOTE: 5-6P.

ABSTRACT: THIS ARTICLE DESCRIBES THE FOURIER TRANSFORM SPECTROSCOPY, AN ALTERNATIVE APPROACH TO OBTAINING FINGERPRINT INFRARED SPECTRA FOR IDENTIFYING SUBSTANCES, PARTICULARLY TRACE CONTAMINANTS. INCLUDED ARE DESCRIPTIONS OF THE EQUIPMENT, METHODOLOGY, AND APPLICATIONS OF THE NEW TECHNIQUE.

AVAILABILITY: BENCH SHEET; V5 N1

IRIS ACCESSION NUMBER: EW008707

PUBLICATION DATE: 83

TITLE: INDIVIDUAL ONSITE WASTEWATER SYSTEMS - VOLUME 8.

PERSONAL AUTHOR: WALDORF, LAWRENCE; EVANS, JOE L.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *COSTS; *ENVIRONMENT; *HEALTH; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *ONSITE TREATMENT; *OPERATIONS (WASTEWATER); *PUBLIC HEALTH; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PRICE: $35.00

ABSTRACT: THIS PUBLICATION IS THE PROCEEDINGS OF THE EIGHTH NATIONAL CONFERENCE, 1981. THE CONFERENCE FOCUSED ON THE PROBLEMS AND OPPORTUNITIES CREATED BY THE SUBSTANTIAL CHANGES IN THE POLITICAL AND ECONOMIC CLIMATE OF THE EARLY 1980'S. COMPREHENSIVE PROGRAMS FOR THE MANAGEMENT OF FAILING ONSITE SYSTEMS ARE DESCRIBED INCLUDING REHABILITATION AND APPLICATION OF WATER CONSERVATION TECHNIQUES. THE HEALTH AND ENVIRONMENTAL CONCERNS OF WASTEWATER REUSE AND THE SUCCESSFUL APPLICATION OF WASTEWATER REUSE TECHNOLOGY IS DESCRIBED. THE USE OF INNOVATIVE/ALTERNATIVE TECHNOLOGY IS CRITICALLY EXAMINED.

AVAILABILITY: NATIONAL SANITATION FOUNDATION, P. O. BOX 1468, ANN ARBOR, MI 48106

IRIS ACCESSION NUMBER: EW008708

PUBLICATION DATE: FEB 83

TITLE: ENVIRONMENTAL POLLUTION AND CONTROL - 2ND EDITION.

PERSONAL AUTHOR: VESILLIND, P. A.; PEIRCE, J. J.

DESCRIPTOR: *AIR; ECONOMICS; *ENVIRONMENTAL PROBLEMS; ENVIRONMENTAL IMPACT STATEMENTS; HIGHER EDUCATION; *INSTRUCTIONAL MATERIALS; LEGISLATION; *NOISE; *POLLUTION; *POST SECONDARY EDUCATION; *SOLID WASTES; *WATER

DESCRIPTIVE NOTE: 375P. PRICE: $14.95

ABSTRACT: THIS BOOK IS DESIGNED TO PRESENT TECHNICAL MATERIAL FOR NON-ENGINEERING AUDIENCES. FOUR MAIN TOPICS ARE COVERED: WATER, AIR, SOLID WASTE (INCLUDING HAZARDOUS AND RADIOACTIVE WASTE) AND NOISE. EACH SUBJECT IS INTRODUCED AS AN ENVIRONMENTAL PROBLEM, FOLLOWED BY A DISCUSSION OF THE MEASURING TECHNIQUES USED FOR ACCURATELY ASSESSING ITS MAGNITUDE. THE SOLUTIONS ARE PRESENTED ALONG WITH A DISCUSSION OF THEIR LEGAL AND ECONOMIC CONSTRAINTS. THE FINAL TWO CHAPTERS COVER THE ORIGIN, PURPOSE, AND FORM OF ENVIRONMENTAL IMPACT STATEMENTS, AND THE DEVELOPMENT OF THE ENVIRONMENTAL ETHIC.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008709

PUBLICATION DATE: MAR 83

TITLE: WATER CHLORINATION: ENVIRONMENTAL IMPACT AND HEALTH EFFECTS. VOLUME 4, BOOKS 1 & 2.

PERSONAL AUTHOR: JOLLEY, ROBERT L.; AND OTHERS

DESCRIPTOR: *CHLORINATION; CHLORINE; *CONFERENCE PROCEEDINGS; *ENVIRONMENTAL IMPACTS; *HEALTH EFFECTS; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; RISKS; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: BOOK 1-788, BOOK 2-700. PRICE: $27.50 BOOK 1, $27.50 BOOK 2, $45.00 2-BOOK SET

ABSTRACT: THESE PUBLICATIONS PRESENT THE CURRENT STATE OF KNOWLEDGE CONCERNING AQUEOUS CHLORINATION WITH PARTICULAR EMPHASIS ON CHLORINATED ORGANIC COMPOUNDS AND ASSOCIATED BIOMEDICAL AND ENVIRONMENTAL EFFECTS. PRESENT PROBLEM AREAS AND FUTURE RESEARCH NEEDS, REGULATIONS, STANDARDS, AND POSSIBLE ALTERNATIVES TO CHLORINE ARE CONSIDERED. BASED ON THE PROCEEDINGS OF A 1981 CONFERENCE THE VOLUME IS DIVIDED INTO TWO BOOKS. BOOK 1 CONSIDERS CHEMISTRY AND WATER TREATMENT. BOOK 2 CONSIDERS ENVIRONMENT, HEALTH, AND RISK.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008710

PUBLICATION DATE: DEC 82

TITLE: PHYSICAL BEHAVIOR OF PCBS IN THE GREAT LAKES.

PERSONAL AUTHOR: MACKAY, DONALD; AND OTHERS

DESCRIPTOR: *AQUATIC ENVIRONMENTS; CASE STUDIES; CHEMISTRY; *CHEMICAL REACTIONS; *GREAT LAKES; *PCBS; STATISTICS

DESCRIPTIVE NOTE: 442P. PRICE: $39.95

ABSTRACT: PROVIDED IS A COMPREHENSIVE REVIEW OF THE PHYSICAL BEHAVIOR OF PCBS IN THE GREAT LAKES. THE BOOK ALSO SERVES AS A MODEL FOR TREATMENT OF OTHER CONTAMINANTS IN OTHER AQUATIC ENVIRONMENTS.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008711

PUBLICATION DATE: MAR 83

TITLE: CHEMISTRY OF WATER TREATMENT.

PERSONAL AUTHOR: FAUST, SAMUEL D.; ALY, OSMAN M.

DESCRIPTOR: COAGULATION; *CHEMISTRY; *CHEMICAL REACTIONS; *DRINKING WATER; FILTRATION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WATER); *WATER TREATMENT; WATER SUPPLY

DESCRIPTIVE NOTE: 450P. PRICE: $40.00

ABSTRACT: THIS TEXT FOCUSES ON CHEMICAL ASPECTS OF WATER QUALITY AND WATER TREATMENT AND SHOWS HOW CHEMISTRY INFLUENCES THE DESIGN OF VARIOUS TREATMENT PROCESSES. MANY ASPECTS OF WATER TREATMENT CHEMISTRY ARE CONSIDERED, INCLUDING REMOVAL OF ORGANIC AND INORGANIC COMPOUNDS, CORROSION CONTROL AND REMOVAL OF TOXIC HEAVY METALS. ALSO EXPLAINED ARE GOVERNMENT WATER QUALITY STANDARDS AND THE RATIONALE FOR THEIR ESTABLISHMENT.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008712

PUBLICATION DATE: JAN 83

TITLE: POLLUTION CONTROL AT ELECTRIC POWER STATIONS.

PERSONAL AUTHOR: BROWN, RICHARD D.; AND OTHERS

DESCRIPTOR: AIR POLLUTION CONTROL; *ELECTRIC POWER GENERATORS; *ELECTRIC POWER STATIONS; *FRANCE; *GERMANY; *COSTS; FACILITIES; NOISE; *POLLUTION CONTROL; *REGULATIONS; SOLID WASTES; *UNITED KINGDOM; *UNITED STATES; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 113P. PRICE: $29.95

ABSTRACT: THIS BOOK REVIEWS RELEVANT COSTS, REGULATIONS, AND ISSUES RELATED TO POLLUTION CONTROL AT ELECTRIC POWER STATIONS IN THE FEDERAL REPUBLIC OF GERMANY, FRANCE, UNITED KINGDOM, AND THE UNITED STATES. POLLUTION CONTROL TOPICS INCLUDE AIR, WATER, NOISE, SOLID WASTES, PLANT SITING, AND AESTHETICS. POLLUTION CONTROL EXPENDITURE DATA IS BROKEN DOWN INTO CAPITAL INVESTMENT COSTS AND OPERATION AND MAINTENANCE COSTS. ALSO PRESENTS INFORMATION ON POLLUTION CONTROL RESEARCH AND DEVELOPMENT COSTS.

AVAILABILITY: ANN ARBOR SCIENCE, ORDER DEPARTMENT, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW008713

PUBLICATION DATE: 80

TITLE: NIOSH/OSHA POCKET GUIDE TO CHEMICAL HAZARDS.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL HAZARDS; *CHEMICAL PROPERTIES; *EXPOSURE LIMITS; *FIRST AID; *HEALTH HAZARDS; *MEASUREMENT; *PHYSICAL PROPERTIES; *SAFETY

DESCRIPTIVE NOTE: PRICE: $9.50 - K2011

ABSTRACT: A TABULATION OF CRITICAL DATA FOR OVER 370 COMPOUNDS. GIVES THE FOLLOWING DATA FOR EACH COMPOUND: CRITICAL CHEMICAL AND PHYSICAL PROPERTIES; PERMISSIBLE EXPOSURE LIMITS AND THE "IMMEDIATELY DANGEROUS TO LIFE AND HEALTH" LEVELS; CHEMICAL INCOMPATIBILITIES AND SUGGESTED METHODS OF MEASUREMENT. ALSO LISTED FOR EACH COMPOUND ARE RECOMMENDATIONS FOR PERSONAL PROTECTION, A RESPIRATOR SELECTION GUIDE AND A TABULATION OF HEALTH HAZARDS (ROUTE OF ENTRY, SYMPTOMS, FIRST AID MEASURES, TARGET ORGANS).

AVAILABILITY: LAB SAFETY SUPPLY CO., P. O. BOX 1368, JANESVILLE, WI 53547-1368

IRIS ACCESSION NUMBER: EW008714

PUBLICATION DATE: 79

TITLE: INDUSTRIAL WASTE WATER MANAGEMENT.

PERSONAL AUTHOR: JORGENSEN, S. E.

DESCRIPTOR: *BIOLOGICAL TREATMENT PROCESSES; *ADSORPTION; *DISINFECTION; *FILTRATION; *FLOTATION; *EFFLUENTS; *INDUSTRIES; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *SEDIMENTATION; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 388P. PRICE: $53.25

ABSTRACT: THIS PUBLICATION CONSIDERS A VARIETY OF INDUSTRIAL SOURCES OF WASTEWATER AND TREATMENT PROCESSES FOR TREATING THE WASTES. INDUSTRIES INCLUDED ARE MINING, METALS, CHEMICALS, PETROLEUM, TEXTILES, PLASTICS, FOODS, PULP AND PAPER, AND LAUNDRIES. VARIOUS TREATMENTS ARE DESCRIBED.

AVAILABILITY: ELSEVIER NORTH-HOLLAND, INC., 52 VANDERBILT AVENUE, NEW YORK, NY 10017

IRIS ACCESSION NUMBER: EW008715

PUBLICATION DATE: 81

TITLE: QUALITY OF GROUNDWATER.

PERSONAL AUTHOR: VAN DUIJVENBOODEN, W.; AND OTHERS

DESCRIPTOR: *CONTAMINATION; *GROUNDWATER; *HAZARDOUS MATERIALS; *MODELS; *POLLUTION; *POLLUTION CONTROL; *RESEARCH; *RESEARCH REPORTS; *WASTE DISPOSAL; *WATER QUALITY

DESCRIPTIVE NOTE: 1,138P. PRICE: $149.00

ABSTRACT: THE 154 PAPERS IN THIS BOOK GIVE A COMPREHENSIVE OVERVIEW OF THE SUBJECT OF GROUNDWATER QUALITY AND GROUNDWATER CONTAMINATION. THEY FORM A REPRESENTATIVE SELECTION OF RECENT RESEARCH IN THIS FIELD BY WELL-KNOWN EXPERTS FROM ALL OVER THE WORLD. SPECIAL ATTENTION IS GIVEN TO THE EFFECTS OF BOTH LOCAL AND DIFFUSE POLLUTING SOURCES ON GROUNDWATER QUALITY AND THE PRESENCE AND BEHAVIOUR OF HAZARDOUS POLLUTANTS, INCLUDING ORGANIC MICROPOLLUTANTS IN SUBSOIL. THE DEVELOPMENT OF MODELS, AND THE COLLECTION AND INTERPRETATION OF DATA ARE ALSO DISCUSSED, AS ARE CRITERIA AND METHODS FOR THE PROTECTION OF GROUNDWATER QUALITY.

AVAILABILITY: ELSEVIER NORTH-HOLLAND, INC., 52 VANDERBILT AVENUE, NEW YORK, NY 10017

IRIS ACCESSION NUMBER: EW008716

PUBLICATION DATE: JAN 82

TITLE: A GUIDE TO HYDROLOGIC ANALYSIS USING SCS METHODS.

PERSONAL AUTHOR: MCCUEN, RICHARD H.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHANNEL ROUTING; *COMPUTER APPLICATIONS; DETENTION BASINS; *ENGINEERING; *HYDROLOGY; *HYDROLOGIC ANALYSIS; *MANUALS; *MATHEMATICAL APPLICATIONS; *MANAGEMENT; *PLANNING; RAINFALL; *SOIL CONSERVATION SERVICE; SURFACE RUNOFF; STORMWATER

DESCRIPTIVE NOTE: 145P.

ABSTRACT: THIS GUIDE PROVIDES PRACTICAL DETAILS FOR APPLYING SOIL CONSERVATION SERVICE (SCS) HYDROLOGIC METHODS TO PEAK DISCHARGE ESTIMATION, RUNOFF HYDROGRAPH FORMATION, CHANNEL ROUTING, STRUCTURE ROUTING, AND DETENTION BASIN VOLUME DETERMINATION. IN ADDITION THE GUIDE PROVIDES A COMPUTER PROGRAM (THE TR-20 METHOD) THE TR-55 METHOD, AND MATERIALS TO HELP APPLY THE METHODS.

AVAILABILITY: PRENTICE-HALL, INC., P. O. BOX 21X, ENGLEWOOD CLIFFS, NJ 07632

IRIS ACCESSION NUMBER: EW008718

PUBLICATION DATE: FEB 82

TITLE: THE GEOCHEMISTRY OF NATURAL WATERS.

PERSONAL AUTHOR: DREVER, JAMES I.

DESCRIPTOR: *CHEMISTRY; *CHEMICAL REACTIONS; *GEOCHEMISTRY; *GUIDES; *LAKES; *OCEANS; *STREAMS; *STATISTICS; *WATER; WATER RESOURCES; WATER QUALITY

DESCRIPTIVE NOTE: 388P.

ABSTRACT: THIS GUIDE PROVIDES INFORMATION FOR ANALYZING THE PROCESSES CONTROLLING THE COMPOSITION OF NATURAL WATERS-STREAMS, LAKES, OCEANS, AND NEAR-SURFACE GROUNDWATERS. THE GUIDE INCLUDES CASE STUDIES, STATISTICAL DATA, EXPLANATIONS OF STATISTICAL DATA, AND VARIOUS CHARTS. CHAPTER HEADINGS INCLUDE: THE HYDROLOGIC CYCLE; CHEMICAL BACKGROUND; THE CARBONATE SYSTEM AND PH CONTROL; CLAY MINERALS AND ION EXCHANGE; STABILITY RELATIONSHIPS AND MINERAL EQUALIBRIA; KINETICS; WEATHERING AND WATER CHEMISTRY; EVAPORATION AND SALINE WATERS; THE OCEANS; THE STANDARD HYDROGEN ELECTRODE; REDOX CONDITIONS IN NATURAL WATERS; TRACE ELEMENTS; MATHEMATICAL AND NUMERICAL MODELS; AND ISOTOPES.

AVAILABILITY: PRENTICE HALL, INC., P. O. BOX 21X, ENGLE CLIFFS, NJ 07632

IRIS ACCESSION NUMBER: EW008719

TITLE: SYSTEM OF HYDRAULIC MODULES.

DESCRIPTOR: *AUDIOVISUAL AIDS; FLOW MEASUREMENT; *HYDRAULICS; *INSTRUCTIONAL MATERIALS; *LABORATORY EQUIPMENT; *LABORATORY INSTRUCTION; *POST SECONDARY EDUCATION; PIPES; PUMPS; *TEACHING GUIDES; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: CONTAINS 11 MODULES.

ABSTRACT: THIS SYSTEM IS DESIGNED AS A SET OF MODULES WHICH CAN BE USED FOR MULTIPLE PURPOSES. A COMPLETE SET OR INDIVIDUAL MODULES CAN BE PURCHASED. THE MODULES WERE DESIGNED TO BE USED IN A TWO YEAR ASSOCIATE DEGREE PROGRAM IN WATER AND WASTEWATER TECHNOLOGY. MODULES ARE SUPPLIED WITH A STUDENT LAB MANUAL. EACH MANUAL INCLUDES A DISCUSSION OF THE CONCEPT TO BE DEMONSTRATED, SET-UP OF EQUIPMENT, DEMONSTRATION PROCEDURE, CALCULATIONS AND USE OF INFORMATION. AN INSTRUCTORS MANUAL IS ALSO PROVIDED. MODULES INCLUDED ARE: (1) PRESSURE; (2) BUOYANCY; (3) MANOMETRY; (4) FLOW CONTINUITY; (5) BERNOULLIS' THEOREM; (6) PIPE FRICTION; (7) FITTING LOSSES; (8) PIPE LOSSES; (9) OPEN CHANNEL FLOW; (10) FLOW MEASUREMENT; AND (11) PUMP CHARACTERISTICS.

AVAILABILITY: TECH LINE, 548 PRAIRIE ROAD, FOND DU LAC, WI 54935

IRIS ACCESSION NUMBER: EW008720

PUBLICATION DATE: 82

TITLE: WATER RESOURCES MANAGEMENT IN INDUSTRIAL AREAS.

PERSONAL AUTHOR: BEARD, LEO R.; MAXWELL, W. H. C.

DESCRIPTOR: *AGRICULTURE; *CONFERENCE PROCEEDINGS; *INDUSTRIES; *MANAGEMENT; *MUNICIPALITIES; *PAPERS; *RECYCLING; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 452P. PRICE: $65.00 PAPER ORDER #D106-TYP128; $95.00 CLOTH ORDER #D106-TYP129

ABSTRACT: THIS WORK CONTAINS A SELECTION OF PAPERS DEALING WITH WATER QUANTITY AND QUALITY MANAGEMENT. THE PAPERS MAINTAIN THAT WATER RESOURCE MANAGEMENT SHOULD EMPHASIZE USE AND REUSE IN SEQUENCES OF MUNICIPAL, INDUSTRIAL, AND AGRICULTURAL OPERATIONS SUCH THAT EACH OPERATION CAN BEST TOLERATE THE EFFECTS OF PRECEDING OPERATIONS.

AVAILABILITY: UNIPBU, BOX 433, MURRAY HILL STATION, NEW YORK, NY 10157

IRIS ACCESSION NUMBER: EW008721

PUBLICATION DATE: 82

TITLE: ENVIRONMENTAL COMPLIANCE AUDITS MANUAL.

DESCRIPTOR: *AUDITS; *COMPLIANCE; *ENVIRONMENTAL COMPLIANCE; *ENVIRONMENTAL AUDITS; *MANUALS; *RECORDS; *SURVEYS

DESCRIPTIVE NOTE: 99P. PRICE: 38.00; CODE #1272

ABSTRACT: PRESENTED IS A STEP-BY-STEP GUIDE FOR CONDUCTING AN ENVIRONMENTAL AUDIT. INFORMATION IS INCLUDED FOR GOALS, CHECKLISTS, QUESTIONNAIRES, AND REPORTING SYSTEMS.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., 966 HUNGERFORD DRIVE, #24, ROCKVILLE, MD 20850

IRIS ACCESSION NUMBER: EW008722

PUBLICATION DATE: 82

TITLE: EPA GUIDEBOOK.

DESCRIPTOR: *EPA; *GUIDES; *ORGANIZATION; *PERSONNEL; *RESPONSIBILITIES

DESCRIPTIVE NOTE: 132P. PRICE: $28.00; CODE #517

ABSTRACT: THIS GUIDEBOOK PROVIDES A COMPREHENSIVE DESCRIPTION OF THE ROLES AND RESPONSIBILITIES OF MAJOR EPA OFFICES AS OF THE TIME OF PUBLICATION. CHANGES HAVE MODIFIED SOME OF THE PERSONNEL LISTED.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., 966 HUNGERFORD DRIVE, #24, ROCKVILLE, MD 20850

IRIS ACCESSION NUMBER: EW008723

PUBLICATION DATE: 82

TITLE: EPA'S RCRA INSPECTION MANUAL.

DESCRIPTOR: *COMPLIANCE; *INSPECTION; *MANUALS; *POLLUTION; *POLLUTION CONTROL; *REGULATIONS; *HAZARDOUS WASTES; *HAZARDOUS MATERIALS; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 300P. PRICE: $35.00; CODE #533

ABSTRACT: THIS MANUAL IS DESIGNED TO HELP PEOPLE COMPLY WITH FIELD INSPECTIONS RELATED TO HAZARDOUS WASTE ENFORCEMENT. INFORMATION IS PROVIDED TO EXPLAIN WHAT COMPLIANCE IS EXPECTED AND WHAT PEOPLE CAN DO TO EFFECTIVELY AND EFFICIENTLY COMPLY WITH THE LAW.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., 966 HUNGERFORD DRIVE, #24, ROCKVILLE, MD 20850

IRIS ACCESSION NUMBER: EW008724

PUBLICATION DATE: 82

TITLE: PLANT MAINTENANCE PROGRAM. MOP OM-3

DESCRIPTOR: FACILITIES; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *MAINTENANCE (PREVENTIVE); *MANUALS; *OPERATIONS; PERFORMANCE EVALUATION; PLANNING; PROGRAM DESCRIPTIONS; *PROGRAM DEVELOPMENT; *SAFETY; TRAINING NEEDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 112P. PRICE: $7.50 MEMBER; $10.00 NONMEMBER

ABSTRACT: BASICALLY A "HOW-TO-SETUP-AN-O&M-PROGRAM" MANUAL, PLANT MAINTENANCE FOCUSES ON A SYSTEMS APPROACH TO CREATING A SUCCESSFUL MAINTENANCE PROGRAM. EMPHASIS IS ON ORGANIZATION, INFORMATION SYSTEMS, PREVENTIVE MAINTENANCE, AND TRAINING NEEDS. THE MANUAL WILL PROVIDE PLANT MANAGEMENT WITH THE NECESSARY FUNCTIONS TO ESTABLISH AND COORDINATE A MAINTENANCE SYSTEM. EACH CHAPTER ADDRESSES A SPECIFIC ASPECT OF AN O&M PROGRAM: PLANNING AND SCHEDULING, IN-HOUSE AND CONTRACT MAINTENANCE, SPARE PARTS, PREVENTIVE MAINTENANCE, EVALUATING O&M PERFORMANCE, AND SAFETY. THE MANUAL IS ILLUSTRATED WITH NUMEROUS EXAMPLES OF FORMS AND CHARTS NECESSARY TO MONITOR O&M PERFORMANCE.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W. WASHINGTON, DC 20037

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IRIS ACCESSION NUMBER: EW008725

PUBLICATION DATE: 82

TITLE: INDUSTRIAL WASTEWATER CONTROL PROGRAM FOR MUNICIPAL AGENCIES. MOP-OM-4.

DESCRIPTOR: GUIDELINES; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *MANUALS; *MUNICIPALITIES; *PLANNING; *POLLUTION CONTROL; PROGRAM DEVELOPMENT; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 166P. PRICE: $13.50 MEMBER; $18.00 NONMEMBER

ABSTRACT: THE PURPAOSE OF THIS MANUAL IS TO PROVIDE GUIDANCE TO MUNICIPAL AGENCIES THAT NEED TO INITIATE OR UPGRADE AN INDUSTRIAL WASTEWATER CONTROL PROGRAM. THE MANUAL PROVIDES INFORMATION FOR USE AND REFERENCE IN PLANNING, EXECUTING, AND MAINTAINING A PROGRAM OF INDUSTRIAL WASTE CONTROL. THIS BOOK IS MAINLY CONCERNED WITH THE CONTROL OF LIQUID-BORNE WASTES FROM INDUSTRIAL MANUFACTURING OR PROCESS OPERATIONS WHICH ARE DISCHARGED INTO A MUNICIPAL SYSTEM. IT IS INTENDED TO PROVIDE INFORMATION FOR A BROAD AUDIENCE INCLUDING ENGINEERS, CHEMISTS, TECHNICIANS AND PLANT OPERATORS, AS WELL AS MANAGERS AND ADMINISTRATORS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008726

PUBLICATION DATE: 82

TITLE: UNITS OF EXPRESSION FOR WASTEWATER MANAGEMENT. MOP 6

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *MANUALS; *MEASUREMENT; *METRIC SYSTEM; *POST SECONDARY EDUCATION; *STANDARDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 47P. PRICE: $6.00 MEMBER; $8.00 NONMEMBER

ABSTRACT: THE LATEST REVISION OF THIS FEDERATION STANDARD HAS EXPANDED THE SCOPE OF THE 1976 EDITION BEYOND TREATMENT TO INCLUDE MANY OTHER FACETS OF WASTEWATER MANAGEMENT. SI CONTINUES TO BE THE RECOMMENDED LANGUAGE FOR WASTEWATER TREATMENT. THIS MANUAL INCLUDE NUMEROUS TABLES FOR CONVERSION FROM AND TO METRIC UNITS, AS WELL AS A LIST OF ACCEPTABLE NON-SI METRIC UNITS. CHAPTERS FOCUS ON METRIC STANDARDS FOR WASTEWATER MANAGEMENT, COMMON UNITS FOR WASTEWATER MANAGEMENT, AND AN EDITORIAL GUIDE.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

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IRIS ACCESSION NUMBER: EW008727

PUBLICATION DATE: 82

TITLE: FINANCING AND CHARGES FOR WASTEWATER SYSTEMS.

DESCRIPTOR: *ADMINISTRATION; *COSTS; *COLLECTION; *ECONOMIC FACTORS; *FINANCING; *GUIDELINES; *RATES; *RATE STRUCTURES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 68P. PRICE: $6.00 MEMBER; $8.00 NONMEMBER

ABSTRACT: PREPARED IN CONJUNCTION WITH THE ASCE AND APWA, THIS PUBLICATION SHOULD BE OF PARTICULAR INTEREST TO PUBLIC AGENCIES PLANNING TO ADOPT NEW RATE STRUCTURES. IT DEALS WITH SUCH TOPICS AS: ELEMENTS AND FUNCTIONS OF WASTEWATER SYSTEMS, ADMINISTRATIVE ARRANGEMENTS FOR SERVICE, FINANCING AND APPORTIONMENT OF COSTS, PRESENT PRACTICES IN RAISING REVENUES, METHODS OF COLLECTING CHARGES, AND PROCEDURES FOR ESTABLISHING FAIR RATES AND CHARGES. IT ALSO PRESENTS SAMPLE RATE STRUCTURES AND ILLUSTRATIVE SCHEDULES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008728

PUBLICATION DATE: 82

TITLE: SEWER CHARGES FOR WASTEWATER COLLECTION AND TREATMENT.

DESCRIPTOR: *CASE STUDIES; *CAPITAL FUNDS; *ECONOMIC FACTORS; *FINANCING; INDUSTRY; MUNICIPALITIES; *RATES; *RATE STRUCTURES; RESIDENCES; *SEWERAGE CHARGES; *SURVEYS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32P. PRICE: $4.50 MEMBER; $6.00 NONMEMBER

ABSTRACT: THIS TEXT PRESENTS A SURVEY OF SEWER-CHARGE METHODS IN 66 CITIES ACROSS THE COUNTRY. THE SURVEY IS ORGANIZED BY POPULATION SIZE AND INCLUDES SEWER SERVICE CHARGE DESCRIPTIONS, EQUIVALENT MONTHLY CHARGES FOR SINGLE FAMILY RESIDENCES, INDUSTRIAL WASTE CHARGES, CONNECTION CHARGE DESCRIPTIONS, AND METHODS OF FINANCING CAPITAL COSTS. IN ADDITION TO THE SURVEY, CASE HISTORIES FOR FOUR MUNICIPALITIES ARE INCLUDED. THESE CASE HISTORIES TRACE THE PROCEDURES LEADING TO THE ESTABLISHMENT OF SUCH CHARGES IN COMMUNITIES OF DIFFERENT SIZES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008729

TITLE: WPCF COLLECTION SYSTEMS BASIC COURSE.

DESCRIPTOR: *AUDIOVISUAL AIDS; FLOW RATES; INSPECTION; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *OPERATIONS (WASTEWATER); OPERATOR TRAINING; SAFETY; *TRAINING PROGRAMS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: COURSE INCLUDES AN INSTRUCTOR'S SET WITH SLIDES AND TAPES, AND STUDENT WORKBOOK. PRICE: $450.00 INSTRUCTOR'S SET; $15.00 STUDENT WORKBOOK.

ABSTRACT: THIS AUDIO-VISUAL TRAINING PROGRAM IS DESIGNED TO PROVIDE THE NEW AND CURRENT EMPLOYEE WITH THE NECESSARY SKILLS TO UNDERSTAND, OPERATE, AND MAINTAIN A COLLECTION SYSTEM. SUBJECTS COVERED IN THE COURSE INCLUDE ESTIMATING AND UNDERSTANDING WASTEWATER FLOW, BLOCKAGES, COMPONENTS OF WASTEWATER, INSPECTING COLLECTION SYSTEMS, SAFETY PROCEDURES, CLEANING, (MECHANICAL AND HYDRAULIC), TESTING, AND EXCAVATION METHODS, SAFE SHORING, AND HOOKUPS. THE COURSE INCLUDES AN INSTRUCTOR'S SET WITH SLIDES AND TAPES, AND A STUDENT WORKBOOK. THERE ARE NO TRAINING PREREQUISITES. THE PROGRAM IS DIRECTED TO AN APPROXIMATE GRADE 8-10 READING/COMPREHENSION LEVEL.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008730

TITLE: PROCESS CONTROL LABORATORY COURSE.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AUDIOVISUAL AIDS; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *LABORATORY SKILLS; *OPERATOR TRAINING; *PROCESS CONTROLS; *POST SECONDARY EDUCATION; *SAMPLING; *TESTING; *TRAINING PROGRAMS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: COURSE INCLUDES INSTRUCTOR'S SET WITH TAPES AND SLIDES, AND STUDENT WORKBOOK. PRICE: $400.00 INSTRUCTOR'S SET; $16.00 STUDENT WORKBOOK.

ABSTRACT: THIS IS AN AUDIO-VISUAL TRAINING PROGRAM DESIGNED TO PROVIDE THE OPERATOR WITH THE NECESSARY TRAINING AND INFORMATION TO PERFORM LABORATORY SAMPLING AND TESTING. PROCEDURES COVERED IN THE COURSE INCLUDE MEASUREMENT OF PH (COLORIMETRIC AND ELECTROMETRIC METHODS), 30-MINUTE SETTLING TEST, TS AND TSS MEASUREMENT, DETERMINING BOD, VOLATILE ACIDS MEASUREMENTS, DETERMINING ALKALINITY, TOTAL RESIDUAL CHLORINE MEASUREMENT (DPD METHOD), AND TVSS AND TDS MEASUREMENTS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008731

PUBLICATION DATE: 82

TITLE: ENERGY CONSERVATION IN THE DESIGN AND OPERATION OF WASTEWATER TREATMENT FACILITIES. MOP FD-2.

DESCRIPTOR: *CONSERVATION; *DESIGN; ECONOMIC FACTORS; *ENERGY CONSERVATION; *FACILITIES; *INSTRUCTIONAL MATERIALS;

*OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; SLUDGE TREATMENT; WASTEWATER REUSE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 123P. PRICE: $11.50 MEMBER; $15.00 NONMEMBER

ABSTRACT: THE PURPOSE OF THIS BOOK IS TWO-FOLD: TO PROVIDE THE DESIGN ENGINEER OR TREATMENT PLANT OPERATOR WITH BASIC INFORMATION ABOUT ENERGY CONSERVATION AND DESIGN, AND TO OUTLINE AREAS WHERE FURTHER STUDY MAY BE NECESSARY. ENERGY CONSIDERATIONS FOR DESIGN OPERATIONS INCLUDE: CONSERVATION CRITERIA, INFORMATION ON SLUDGE TREATMENT PROCESSES, REUSE OF WASTEWATER, AND WASTE HEAT RECOVERY. NUMEROUS CHARTS AND GRAPHS PROVIDE BACKUP FOR THE TEXT. THE MANUAL DISCUSSES THE ENERGY NEEDS OF EACH INDIVIDUAL STEP IN THE TREATMENT PROCESS, SO ENERGY USAGE AND COST OF EACH STAGE OF THE SYSTEM IS AVAILABLE. IN THE FINAL CHAPTER THE RELATION AND IMPORTANCE OF ECONOMIC AND ENVIRONMENTAL CONSIDERATIONS ARE SUMMARIZED.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008732

PUBLICATION DATE: 82

TITLE: GRAVITY SANITARY SEWER DESIGN. MOP FD-5.

DESCRIPTOR: *CONSTRUCTION; *DESIGN; ENGINEERING; *GRAVITY SANITARY SEWERS; GUIDELINES; *INSTRUCTIONAL MATERIALS; *MANUALS; *POST SECONDARY EDUCATION; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 288P. PRICE: $15.00 MEMBER; $20.00 NONMEMBER

ABSTRACT: PREPARED IN CONJUNCTION WITH THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE), THE MANUAL PROVIDES BOTH THEORETICAL AND PRACTICAL GUIDANCE IN THE DESIGN AND CONSTRUCTION OF GRAVITY SANITARY SEWERS. THE INITIAL CHAPTER DEALS WITH ORGANIZATOON AND ADMINISTRATION OF SANITARY SEWER PROJECTS. SUBSEQUENT CHAPTERS PROVIDE GUIDELINES NECESSARY TO ESTABLISH THE DESIGN CRITERIA, COMPLETE THE DESIGN, AND AWARD THE CONSTRUCTION CONTRACT. THE MANUAL ALSO INCLUDES AN EXAMINATION OF CONSTRUCTION CONTRACT DOCUMENTS, AND CONSTRUCTION METHODS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW008733

PUBLICATION DATE: 82

TITLE: ENVIRONMENTALLY SOUND WATER AND SOIL MANAGEMENT.

DESCRIPTOR: *CASE STUDIES; *CONFERENCE PROCEEDINGS; *DRAINAGE; *ENVIRONMENTAL IMPACTS; *GROUNDWATER; *IRRIGATION; *MANAGEMENT; *RESEARCH REPORTS; SOILS; STREAMS; WASTEWATER USE; *WATER QUALITY; *WATER RESOURCES; WATERSHEDS; WETLANDS

DESCRIPTIVE NOTE: 544P. PRICE: $42.50 NONMEMBERS; $31.75 ASCE MEMBERS (1 COPY)

ABSTRACT: THE 67 PAPERS INCLUDED IN THE PROCEEDINGS DESCRIBE CURRENT IRRIGATION AND DRAINAGE PRACTICE WITH EMPHASIS ON ENVIRONMENTAL INTERACTIONS AND APPLICATIONS IN THE SOURTHEASTERN UNITED STATES. TOPICS COVERED INCLUDE: STREAM AND WETLANDS MANAGEMENT; FORESTRY AND WATERSHED MANAGEMENT; IMPACT OF PRACTICES ON RECEIVING WATERS; DRAINAGE IN THE SOUTHEAST; EFFECTS ON WATER QUALITY AND NUTRIENT LEACHING; GROUNDWATER PROBLEMS; URBAN DRAINAGE; PROJECT FORMULATION; RESEARCH NEEDS; METRICATION IN WATER RESOURCES; WATER REQUIREMENTS; AND USE OF WASTEWATER.

AVAILABILITY: AMERICAN SOCIETY OF CIVIL ENGINEERS, 345 EAST 47TH STREET, NEW YORK, NY 10017

IRIS ACCESSION NUMBER: EW008737

TITLE: RECENT TRENDS IN HYDROGEOLOGY.

PERSONAL AUTHOR: NARASIMHAN, T. N.

DESCRIPTOR: AQUIFERS; *ENGINEERING; GEOLOGY; GROUNDWATER; *HYDROGEOLOGY; HYDROLOGY; MATHEMATICAL APPLICATIONS; MEASUREMENT; *RESEARCH REPORTS; *STATE-OF-THE-ART REVIEWS; *WATER RESOURCES; WELLS

DESCRIPTIVE NOTE: 448P. PRICE: $32.00

ABSTRACT: THIS PUBLICATION IS A STATE OF THE ART SURVEY OF THE DIRECTION IN WHICH HYDROGEOLOGY IS PROCEEDING. THE 23 PAPERS ARE DIVIDED INTO FIVE SECTIONS: CONCEPTUAL ASPECTS, MEASUREMENT, MATHEMATICAL ASPECTS, REGIONAL ASPECTS AND ENGINEERING. SUBJECTS COVERED RANGE FROM AQUIFER THERMAL ENERGY STORAGE TO HYDROGEOLOGY OF INDUCED SEISMICITY AND TECTONISM TO WELL-LOSS FUNCTION.

AVAILABILITY: GEOLOGICAL SOCIETY OF AMERICA, P. O. BOX 9140, BOULDER, CO 80301

IRIS ACCESSION NUMBER: EW008738

PUBLICATION DATE: 82

TITLE: HAZARDOUS WASTE LEACHATE MANUAL.

PERSONAL AUTHOR: SHUCKROW, ALAN J.

DESCRIPTOR: *HAZARDOUS MATERIALS; *HAZARDOUS WASTES; LEACHATES; MANAGEMENT; *MANUALS; *SAFETY; TOXIC SUBSTANCES; *WASTE DISPOSAL; *WASTE LEACHATES; *WASTE MANAGEMENT; *WASTE TREATMENT

DESCRIPTIVE NOTE: 379P. PRICE: $36.00

ABSTRACT: THIS BOOK DESCRIBES VARIOUS MANAGEMENT OPTIONS

FOR CONTROLLING, TREATING, AND DISPOSING OF WASTE LEACHATES. SPECIAL SECTIONS ON SAFETY AND EMERGENCY OPERATIONS ARE INCLUDED.

AVAILABILITY: NOYES DATA CORPORATION, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW008739

PUBLICATION DATE: 82

TITLE: SURVEY OF CONTEMPORARY TOXICOLOGY: VOLUME 2.

PERSONAL AUTHOR: TU, ANTHONY T.

DESCRIPTOR: CHEMISTRY; *INSTRUCTIONAL MATERIALS; *MARINE ENVIRONMENT; *PESTICIDES; *POST SECONDARY EDUCATION; *STATE-OF-THE-ART-REVIEWS; *TOXICOLOGY; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 248P. PRICE: $50.00

ABSTRACT: THIS COMPANION TO THE FIRST VOLUME OF THE SAME TITLE SYSTEMATICALLY SUMMARIZES MANY CURRENTLY IMPORTANT AREAS IN TOXICOLOGY, INCLUDING MARINE TOXICOLOGY. ALSO OF INTEREST MAY BE A SECTION ON PESTICIDE TOXICOLOGY.

AVAILABILITY: JOHN WILEY 8 SONS, INC., 605 THIRD AVENUE, NEW YORK, NY 10158

IRIS ACCESSION NUMBER: EW008741

PUBLICATION DATE: 82

TITLE: URBAN WATER CONSERVATION: INCREASING EFFICIENCY-IN-USE RESIDENTIAL WATER DEMAND.

PERSONAL AUTHOR: FLACK, J. ERNEST

DESCRIPTOR: *CONSERVATION; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *RESIDENTIAL USE; *URBAN AREAS; *WATER CONSERVATION; *WATER RESOURCES; *WATER SUPPLY; *WATER USE

DESCRIPTIVE NOTE: 99P. PRICE: $13.25

ABSTRACT: THIS PAPERBACK REPORT IS AN ASSESSMENT OF VARIOUS WATER CONSERVATION MEASURES AIMED AT REDUCING RESIDENTIAL WATER USAGE.

AVAILABILITY: AMERICAN SOCIETY OF CIVIL ENGINEERS, 345 EAST 47TH STREET, NEW YORK, NY 10017

IRIS ACCESSION NUMBER: EW008743

PUBLICATION DATE: 81

TITLE: PERSPECTIVES IN RUNNING WATER ECOLOGY.

PERSONAL AUTHOR: LOCK, MAURICE A.; WILLIAMS, D. DUDLEY

DESCRIPTOR: *ECOLOGY; ENTOMOLOGY; GROUNDWATER; *INSTRUCTIONAL MATERIALS; MICROBIOLOGY; PALEOECOLOGY; *POST SECONDARY EDUCATION; *RESEARCH REPORTS; *STREAM ECOLOGY; *STREAMS; *WATER RESOURCES; ZOOLOGY

DESCRIPTIVE NOTE: 430P. PRICE: $49.50

ABSTRACT: THIS COLLECTION OF WORKS BY ASSOCIATES AND STUDENTS OF H. B. NOEL HYNES IS FURTHER EVIDENCE OF THE INCREASING MATURITY OF THE FIELD OF STREAM ECOLOGY. TOPICS RANGING FROM GROUNDWATER STUDIES TO PALEOECOLOGY WILL BE OF INTEREST TO ZOOLOGISTS, ECOLOGISTS, MICROBIOLOGISTS, AND ENTOMOLOGISTS BECAUSE MANY OF THESE INTERRELATED TOPICS ARE REVIEWED HER FOR THE FIRST TIME.

AVAILABILITY: PLENUM PUBLISHING CORP., 223 SPRING STREET, NEW YORK, NY 10013

IRIS ACCESSION NUMBER: EW008744

PUBLICATION DATE: 82

TITLE: HANDBOOK OF CHEMICAL PROPERTY ESTIMATION METHODS.

PERSONAL AUTHOR: LYMAN, WARREN J.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL PROPERTIES; *CHEMICALS; *CHEMISTRY; *ESTIMATION; *ENVIRONMENT; *HANDBOOKS; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *ORGANIC COMPOUNDS

DESCRIPTIVE NOTE: 960P. PRICE: $42.50

ABSTRACT: THIS HANDBOOK PROVIDES COST-EFFECTIVE SOLUTIONS TO PROBLEMS FREQUENTLY ENCOUNTERED BY CHEMISTS, ENGINEERS, AND TECHNICAL MANAGERS. IT FOCUSES ON SIMPLE ESTIMATION METHODS FOR 26 IMPORTANT PROPERTIES OF ORGANIC CHEMICALS THAT ARE OF ENVIRONMENTAL CONCERN. THE METHODS IT PRESENTS ALLOW THE USER TO OBTAIN ESTIMATIONS IN JUST A FEW MINUTES WITH NO MORE THAN A SIMPLE CALCULATOR.

AVAILABILITY: MCGRAW-HILL BOOK COMPANY, 1221 AVENUE OF THE AMERICAS, NEW YORK, NY 10020

IRIS ACCESSION NUMBER: EW008745

PUBLICATION DATE: 81

TITLE: MUNICIPAL SLUDGE APPLICATION TO PACIFIC NORTHWEST FOREST LANDS.

PERSONAL AUTHOR: BLEDSOE, CAROLINE S.

DESCRIPTOR: *CASE STUDIES; *FERTILIZER; *FORESTRY; *LAND APPLICATION; *MUNICIPAL WASTES; *PACIFIC NORTHWEST; PUBLIC HEALTH; *RESEARCH REPORTS; *SLUDGE; SOILS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 155P.

ABSTRACT: NINE YEARS OF RESEARCH BY UNIVERSITY OF WASHINGTON SCIENTISTS INTO SLUDGE UTILIZATION IN FOREST FERTILIZATION ARE DRAWN TOGETHER IN THIS COMPILATION OF PAPERS PRESENTED FROM JULY 8-10, 1980, AT THE UNIVERSITY. WORKING TOGETHER, UNIVERSITY RESEARCHERS AND SEATTLE MUNICIPAL AUTHORITIES HAVE HAD SOME SUCCESS IN SOLVING THE DUAL PROBLEM OF MEETING THE NEED FOR INCREASED TIMBER PRODUCTION AND FINDING DISPOSAL SITES FOR GROWING AMOUNTS OF SLUDGE, WHILE PROTECTING PUBLIC HEALTH. THIS REPORT ANALYZES THE PACIFIC NORTHWEST'S PARTICULAR PROBLEMS, THE BIOLOGICAL EFFECTS OF SLUDGE APPLICATION ON SOIL, AND THE BROADER HORIZON FOR SLUDGE USE AS A FOREST FERTILIZER.

AVAILABILITY: COLLEGE OF FOREST RESOURCES, AR-10, UNIVERSITY OF WASHINGTON, SEATTLE, WA 98195

IRIS ACCESSION NUMBER: EW008746

PUBLICATION DATE: 82

TITLE: CARBONACEOUS ADSORBENTS FOR THE TREATMENT OF GROUND AND SURFACE WATERS.

PERSONAL AUTHOR: NEELY, JAMES W.; ISACOFF, ERIC G.

DESCRIPTOR: *CARBON ADSORPTION; *CARBONACEOUS ADSORBENTS; CONTAMINANTS; *DRINKING WATER; GROUNDWATER; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *TECHNOLOGICAL ADVANCEMENTS; *TEXTBOOKS; WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 240P. PRICE: $39.75

ABSTRACT: THIS TEXT OUTLINES THE BASICS OF THE NEW POLYMER CARBON ADSORPTION TECHNOLOGY THAT REPRESENTS AN ALTERNATIVE TO ACTIVATED CARBON TREATMENT. CARBONACEOUS ADSORBENTS MAY BE USED TO TREAT DRINKING WATER FOR TRACE CONTAMINANTS WITHOUT THE SIDE EFFECTS OF ACTIVATED CARBON PROCESSES.

AVAILABILITY: MARCEL DEKKER, INC., 270 MADISON AVENUE, NEW YORK, NY 10016

IRIS ACCESSION NUMBER: EW008747

PUBLICATION DATE: 82

TITLE: MANAGEMENT OF INDUSTRIAL WASTEWATER IN DEVELOPING NATIONS.

PERSONAL AUTHOR: STUCKEY, DAVID; HAMZA, AHMED

DESCRIPTOR: ANAEROBIC TREATMENT; *CASE STUDIES; *DEVELOPING NATIONS; *INDUSTRIAL WASTES; *MANAGEMENT; MONITORING; *OPERATIONS (WASTEWATER); POLLUTION CONTROL; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 500P. PRICE: $70.00

ABSTRACT: THIS COLLECTION OF PAPERS INCLUDES DIVERSE TOPICS, AMONG THEM THE EFFECT OF POLLUTION ON RELATIONS BETWEEN NATIONS, THE SAO PAULO (BRAZIL) WASTEWATER POLLUTION CONTROL PROJECT, SURVEILLANCE AND MONITORING, ANAEROBIC TREATMENT, AND WASTES FROM SPECIFIC TYPES OF INDUSTRIAL PLANTS IN THE DEVELOPING WORLD.

AVAILABILITY: PERGAMON PRESS, INC., MAXWELL HOUSE, FAIRVIEW PARK, ELMSFOR, NY 10523

IRIS ACCESSION NUMBER: EW008748

PUBLICATION DATE: 82

TITLE: ENVIRONMENTAL SCIENCE METHODS.

PERSONAL AUTHOR: HAYNES, ROBIN

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ENVIRONMENTAL SCIENCES; *INSTRUCTIONAL MATERIALS; *LABORATORY TECHNIQUES; *MATHEMATICS; *MEASUREMENT; MICROSCOPY; *POST SECONDARY EDUCATION; REMOTE SENSING; *STATISTICS; SURVEYING

DESCRIPTIVE NOTE: 404P. PRICE: $19.95 PAPER; $39.95 HARDCOVER

ABSTRACT: THIS BOOK DISCUSSES VARIOUS QUANTITATIVE METHODS IN THE ENVIRONMENTAL SCIENCES. AMONG TOPICS COVERED ARE MATHEMATICS AND STATISTICS, MEASUREMENT, COMPUTING, SURVEYING, MICROSCOPY, REMOTE SENSING, SOCIAL SURVEYS, AND LABORATORY TECHNIQUES.

AVAILABILITY: METHUEN, INC., 733 THIRD AVENUE, NEW YORK, NY 10017

IRIS ACCESSION NUMBER: EW008750

PUBLICATION DATE: 82

TITLE: THE WORLD ENVIRONMENT HANDBOOK: A DIRECTORY OF GOVERNMENT NATURAL RESOURCE MANAGEMENT AGENCIES IN 144 COUNTRIES.

DESCRIPTOR: AGRICULTURE; *DIRECTORIES; ENERGY; *ENVIRONMENTAL PROTECTION; *ENVIRONMENTAL QUALITY; *GOVERNMENT AGENCIES; HEALTH; *INDEXES; INDUSTRY; *INFORMATION SOURCES; *MANAGEMENT; *NATURAL RESOURCES; PARKS; *PERSONNEL; PUBLIC HEALTH; WATER RESOURCES; WATER QUALITY

DESCRIPTIVE NOTE: PRICE: $25.00 PLUS POSTAGE.

ABSTRACT: THIS BOOK LISTS NEARLY 400 GOVERNMENT ENVIRONMENT AGENCIES FROM AFGHANISTAN TO ZIMBABWE, AND SERVES AS AN INTERNATIONAL "WHO'S WHO" IN THE ENVIRONMENT FIELD. AGENCIES LISTED DEAL WITH AGRICULTURE, WATER, INDUSTRY, NATIONAL PARKS, HEALTH, ENERGY, AND OTHER AREAS.

AVAILABILITY: WORLD ENVIRONMENT CENTER, 605 THIRD AVENUE, 17TH FLOOR, NEW YORK, NY 10158

IRIS ACCESSION NUMBER: EW008751

TITLE: PROTEIN RECOVERY FROM FOOD PROCESSING WASTEWATERS.

PERSONAL AUTHOR: BESZEDITS, STEPHEN; NETZER, AHARON

DESCRIPTOR: COAGULATION; *FOOD PROCESSING; *OPERATIONS (WASTEWATER); PRECIPITATION; *PROTEIN; *PROTEIN RECOVERY; REVERSE OSMOSIS; *STATE-OF-THE-ART REVIEWS; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER RECLAMATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 160P. PRICE: $75.00 ($90.00 CANADIAN)

ABSTRACT: THIS REVIEW SETS FORTH THE LATEST TECHNIQUES FOR RECLAIMING PROTEINS FROM FOOD PROCESSING WASTEWATERS. INCLUDED ARE COAGULATION, PRECIPITATION, REVERSE OSMOSIS, AND OTHER METHODS.

AVAILABILITY: B 8 L INFORMATION SERVICES, P. O. BOX 458, POSTAL STATION "L", 473 OAKWOOD AVENUE, TORONTO, ONTARIO M6E 2W4, CANADA

IRIS ACCESSION NUMBER: EW008753

PUBLICATION DATE: 82

TITLE: GROUND WATER.

PERSONAL AUTHOR: RAGHUNATH, H. M.

DESCRIPTOR: DESIGN; *GROUNDWATER; *INSTRUCTIONAL MATERIALS; IRRIGATION; *MANAGEMENT; *POST SECONDARY EDUCATION; RURAL AREAS; *WATER RESOURCES; WATER SUPPLY; WATER USE

DESCRIPTIVE NOTE: 454P. PRICE: $29.95

ABSTRACT: THIS BOOK COVERS MANY ASPECTS OF GROUNDWATER, INCLUDING ASSESSMENT, UTILIZATION, AND MANAGEMENT. PROCEDURES AND DESIGNS FOR GROUNDWATER SYSTEMS ARE PRESENTED, AND RURAL WATER SUPPLY AND IRRIGATION USE ARE EMPHASIZED. THE BOOK IS AIMED AT GRADUATE STUDENTS AND PROFESSIONALS.

AVAILABILITY: JOHN WILEY 8 SONS, INC., ONE WILEY DRIVE, SOMERSET, NJ 08873

IRIS ACCESSION NUMBER: EW008754

PUBLICATION DATE: 81

TITLE: EFFECTIVE MANAGEMENT FOR ENGINEERS AND SCIENTISTS.

PERSONAL AUTHOR: WORTMAN, LEON A.

DESCRIPTOR: *COMMUNICATIONS; *EMPLOYEE RELATIONS; ENGINEERS; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *POST SECONDARY EDUCATION; SCIENTISTS; *SUPERVISION; *TECHNIQUES; *TEXTBOOKS

DESCRIPTIVE NOTE: 275P. PRICE: $24.95

ABSTRACT: THIS BOOK PRESENTS TECHNIQUES FOR COMMUNICATIONS, PRODUCTIVE MEETINGS, LEADERSHIP, COPING WITH DIFFICULT SUBORDINATES IN A POSITIVE WAY, CONFLICT MANAGEMENT AND MANAGING THE NON-CONFORMIST AND CREATIVE PROFESSIONAL. IN ADDITION, INFORMATION IS PROVIDED ON HOW TO USE TIME EFFECTIVELY AND HOW TO HANDLE RED TAPE.

AVAILABILITY: JOHN WILEY 8 SONS, INC., ONE WILEY DRIVE, SOMERSET, NJ 08873

IRIS ACCESSION NUMBER: EW008755

PUBLICATION DATE: 82

TITLE: HANDBOOK OF CHEMICAL MICROSCOPY, VOLUME 1, 4TH EDITION.

PERSONAL AUTHOR: MASON, CLYDE WALTER

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICAL ANALYSIS; *CHEMICAL MICROSCOPY; *CHEMISTRY; *HANDBOOKS; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MICROSCOPY; POST SECONDARY EDUCATION; *REFERENCE MATERIALS

DESCRIPTIVE NOTE: 448P. PRICE: $69.95

ABSTRACT: THIS BOOK COVERS ALL ASPECTS OF PHYSICAL METHODS AND CHEMICAL ANALYSIS. IT INCLUDES THOUSANDS OF SELECTED REFERENCES FOR FURTHER STUDY, AND EXPERIMENTS FOR DEMONSTRATING THEORY AND PRACTICAL APPLICATIONS IN PHYSICAL CHEMISTRY, OPTICS, POLYMERS, COLLOIDS, AND CHEMICAL CRYSTALLOGRAPHY.

AVAILABILITY: JOHN WILEY 8 SONS, INC., ONE WILEY DRIVE, SOMERSET, NJ 08873

IRIS ACCESSION NUMBER: EW008763

PUBLICATION DATE: FEB 82

TITLE: WATER TREATMENT FOR SMALL PUBLIC SUPPLIES.

PERSONAL AUTHOR: WILSON, DONALD B.; DRAN, RAYMOND M.

DESCRIPTOR: *DRINKING WATER; *ELECTRODIALYSIS; *NEW MEXICO; *REVERSE OSMOSIS; *RURAL AREAS; *WATER TREATMENT; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 104P. PB83-108175

ABSTRACT: REVERSE OSMOSIS (RO) AND ELECTRODIALYSIS (ED) WERE SHOWN TO BE SUCCESSFUL METHODS FOR UPGRADING CURRENT DRINKING WATER SUPPLIES FOR SMALL NEW MEXICO COMMUNITIES TO MEET DRINKING WATER STANDARDS. A MOBILE DEMONSTRATION UNIT WAS OPERATED 500-2000 HOURS IN EACH OF NINE COMMUNITIES VISITED, USING FEED FROM THE CURRENT DRINKING WATER SUPPLY. IN ALL CASES, PRODUCT WATER FROM THE DEMONSTRATION UNIT (AS CERTIFIED BY THE APPROPRIATE AGENCY) MET DRINKING WATER STANDARDS. ENGINEERING DESIGN DATA ARE PRESENTED FOR THE EVALUATION OF ED, RO, AND ION-EXCHANGE UNIT OPERATIONS FOR

APPLICATION IN THE DRINKING WATER SYSTEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008764

PUBLICATION DATE: JUN 82

TITLE: A COOPERATIVE WATER RESOURCE TECHNOLOGY TRANSFER PROGRAM.

PERSONAL AUTHOR: D'LTRI, FRANK M.

DESCRIPTOR: *EDUCATIONAL PROGRAMS; *MICHIGAN; *PROGRAM DESCRIPTIONS; *TECHNOLOGY TRANSFER; *WATER RESOURCES

DESCRIPTIVE NOTE: 52P. PB83-168266

ABSTRACT: THIS COOPERATIVE WATER RESOURCE TECHNOLOGY TRANSFER PROGRAM SOUGHT TO DEVELOP/PRESENT EDUCATIONAL PROGRAMS (CONFERENCES/SEMINARS/WORKSHOPS) AND TECHNOLOGY TRANSFER BROCHURES TO ENHANCE PUBLIC AWARENESS/APPRECIATION OF STATE WATER QUALITY PROBLEMS AND TO STRESS ECONOMIC TRADEOFFS NEEDED TO RESOLVE GIVEN PROBLEMS. ACCOMPLISHMENTS OF THIS PROGRAM FOR THE DIFFERENT CONFERENCES HELD 1979-1981 ARE DESCRIBED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008765

PUBLICATION DATE: JUN 82

TITLE: TOWARD INSTREAM WATER QUALITY MANAGEMENT.

PERSONAL AUTHOR: OSTEEN, C.; AND OTHERS

DESCRIPTOR: *AGRICULTURAL POLLUTION; *MANAGEMENT; *NONPOINT SOURCE POLLUTION; *POLLUTION CONTROL; *SOURCE CONTROL; *STREAMS; WATER QUALITY

DESCRIPTIVE NOTE: 68P. PB83-110957

ABSTRACT: THIS REPORT COMPARES TWO APPROACHES TO THE AGRICULTURAL NON-POINT SOURCE POLLUTION CONTROL PROBLEM: SOURCE CONTROL AND INSTREAM WATER QUALITY MANAGEMENT (ISWQM). SOURCE CONTROL IS A STRATEGY OF CONTROLLING POLLUTION LOADINGS BY USING STANDARDS SUCH AS SOIL LOSS LIMITS OR BEST MANAGEMENT PRACTICES WITHOUT RELATING THEM DIRECTLY TO WATER QUALITY GOALS. ISWQM IS A STRATEGY FOR DETERMINING WATER QUALITY GOALS BY EXAMINING POLLUTION EFFECTS AND OTHER CONSIDERATIONS AND DEVELOPING A RESOURCE MANAGEMENT PLAN FOR ACHIEVING THOSE GOALS. ISWQM RELATES LAND MANAGEMENT MORE CLOSELY TO WATER QUALITY GOALS. THE REPORT DISCUSSES THE INFORMATION NEEDS, INSTITUTIONAL ARRANGEMENTS, AND THE STRENGTHS AND WEAKNESSES OF EACH APPROACH.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008766

PUBLICATION DATE: OCT 82

TITLE: AERATION OF SEWAGE LAGOONS, RESERVOIRS, AND STREAMS. AUGUST, 1981-SEPTEMBER, 1982 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *AERATION; *ANNOTATED BIBLIOGRAPHIES; *AGRICULTURAL WASTES; BIBLIOGRAPHIES; *LAGOONS; *MUNICIPAL WASTES; *STREAMS; *RESERVOIRS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 46P. PB83-800524

ABSTRACT: THESE FEDERALLY-FUNDED REPORTS HAVE BEEN DIVIDED INTO TWO SECTIONS. THE FIRST COVERS AERATION LAGOONS USED IN BIOLOGICAL WASTE TREATMENT, INCLUDING MUNICIPAL SEWAGE TREATMENT AS WELL AS TREATMENT OF AGRICULTURAL WASTES. THE SECOND SECTION CITES STUDIES ON THE AERATION OF STREAMS AND RESERVOIRS TO IMPROVE THEIR WATER QUALITY. (THIS UPDATED BIBLIOGRAPHY CONTAINS 37 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008767

PUBLICATION DATE: OCT 82

TITLE: ECOLOGY OF THE MARINE ENVIRONMENT. AUGUST, 1981-SEPTEMBER, 1982 (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *BIOLOGY; *ECOLOGY; *ENVIRONMENT; *MARINE ENVIRONMENT; *OCEANOLOGY; *POLLUTION; *RESEARCH REPORTS; *ZOOLOGY

DESCRIPTIVE NOTE: 244P. PB83-800755

ABSTRACT: THE SELECTED ABSTRACTS OF RESEARCH REPORTS COVER SALT WATER ECOLOGY OF SHELLFISH, FISHES, AQUATIC PLANTS, AQUATIC ANIMALS, AND AQUATIC MICROORGANISMS. ESTUARY STUDIES ARE INCLUDED AS ARE POLLUTION EFFECTS, EXCEPT FOR REPORTS DEALING WITH PESTICIDES AND OIL POLLUTION. (THIS BIBLIOGRAPHY CONTINS 236 CITATIONS, ALL OF WHICH ARE NEW ENTRIES.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008768

PUBLICATION DATE: OCT 82

TITLE: AERIAL PHOTOGRAPHY: ITS USE IN THE STUDY OF COASTAL EROSION AND POLLUTION 1974-OCTOBER, 1982 (CITATIONS FROM OCEANIC ABSTRACTS).

DESCRIPTOR: *AERIAL PHOTOGRAPHY; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *COASTAL EROSION; *EROSION; *PHOTOGRAPHY; *POLLUTION; *SURVEYING

DESCRIPTIVE NOTE: 98P. PB83-852079

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING AERIAL PHOTOGRAPHY AND ITS USE AS A MEANS TO STUDY COASTAL SHORELINE PROBLEMS SUCH AS EROSION AND POLLUTION, AND TO SURVEY COASTAL AND LAND AREAS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 98 CITATIONS, 16 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008769

PUBLICATION DATE: MAR 82

TITLE: APPROPRIATE SELECTION OF WATER/WASTEWATER TREATMENT PROCESSES FOR SMALL CITIES AND RURAL AREAS.

PERSONAL AUTHOR: REID, GEORGE W.; AND OTHERS

DESCRIPTOR: *COMPUTER APPLICATIONS; *CALCULATORS; *MUNICIPALITIES; *PLANNING; *RURAL AREAS; *WATER TREATMENT; *WASTEWATER TREATMENT; *WATER SUPPLY; *WATER QUALITY

DESCRIPTIVE NOTE: 87P. PB82-254889

ABSTRACT: SMALL COMMUNITIES OFTEN HAVE TO RESORT TO USAGE OF HIGHLY INAPPROPRIATE AND SOPHISTICATED SYSTEMS THAT ARE DIFFICULT TO OPERATE AND MAINTAIN WITH REGARD TO THEIR WATER SUPPLY AND SANITATION NEEDS. A COMPUTER APPLICATION MODEL IS PRESENTED THAT WILL AID ENGINEERS/PLANNERS IN DETERMINING A COMMUNITY'S NEEDS AND RESOURCES. TWO VERSIONS OF THIS MODEL WERE DEVELOPED: ONE, FOR USE ON A LOW-COST MICROCOMPUTER; THE OTHER, FOR USE WITH A HAND-HELD CALCULATOR. BOTH OF THESE VERSIONS CONSIDER THE SOCIO-TECHNOLOGICAL LEVEL OF THE COMMUNITY, AS WELL AS INDIGENOUS INFORMATION COVERING WATER QUALITY AND DEMOGRAPHIC DATA. THE MODEL IDENTIFIES WATER AND WASTE TREATMENT ALTERNATIVES WHICH ARE COMPATIBLE WITH LOCAL AVAILABLE RESOURCES AND MANPOWER CAPABILITIES; APPLICATION OF APPROPRIATE TECHNOLOGY SUBSTANTIALLY ENHANCES THE ABILITY OF THE COMMUNITY TO SATISFY ITS WATER AND WASTEWATER TREATMENT OBJECTIVES. COMMUNITY INFORMATION WAS OBTAINED FROM THE USE OF TWO SURVEY QUESTIONNAIRES TO ASSIST IDENTIFICATION OF APPROPRIATE TECHNOLOGY FOR WATER/WASTEWATER TREATMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008770

PUBLICATION DATE: MAR 81

TITLE: HEALTH EFFECTS DUE TO THE CESSATION OF CHLORINATION OF WASTEWATER TREATMENT PLANT EFFLUENTS.

PERSONAL AUTHOR: HOLDEN, JANET A.

DESCRIPTOR: *CHLORINATION; *EFFLUENTS; *HEALTH EFFECTS; *ILLINOIS; *PARTICULATES; *RESEARCH; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 112P. PB82-253717

ABSTRACT: VERY SMALL, OR 'INHALABLE,' PARTICULATES ARE SUSPECTED OF BEING A MAJOR CAUSE OF ADVERSE HUMAN HEALTH EFFECTS. THIS REPORT EXAMINES THE CURRENTLY AVAILABLE INFORMATION ON INHALABLE PARTICULATES OCCURRING IN ILLINOIS AND DISCUSSES POTENTIAL HEALTH IMPACTS. THE RESEARCH WILL BE USEFUL IN ASSESSING THE IMPACTS OF INHALABLE PARTICULATE REGULATIONS IF ADOPTED BY THE FEDERAL GOVERNMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008771

PUBLICATION DATE: MAR 82

TITLE: HAZARDOUS POLLUTANT ANALYSIS ON WATER USING INFRARED SPECTROSCOPY.

PERSONAL AUTHOR: ANDERSON, CAROL P.; BENTZ, ALAN P.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *INFRARED; *LABORATORY PROCEDURES; *ORGANIC COMPOUNDS; *POLLUTANTS; *SPECTROSCOPY

DESCRIPTIVE NOTE: 25P. PB83-108373

ABSTRACT: A SIMPLE PROCEDURE INVOLVING AN EXTRACTION-CONCENTRATION METHOD FOLLOWED BY COMPUTER INFRARED (IR) SPECTRAL ENHANCEMENT WAS DEVELOPED WHICH PROVIDES DETECTION AND IDENTIFICATION OF ORGANIC POLLUTANT COMPOUNDS OF MODERATE-TO-LOW VOLATILITY IN ESTUARINE AND COASTAL WATERS, DOWN TO 1-10 PPM (DEPENDING ON THE IR ABSORPTIVITY OF THE COMPOUNDS). SINCE IR CAN BE USED FOR NONVOLATILE COMPOUNDS, IT IS A NATURAL COMPLEMENT TO GAS CHROMATOGRAPHIC TECHNIQUES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008772

PUBLICATION DATE: APR 82

TITLE: A CURRICULUM FOR WATER SUPPLY AND WASTEWATER OPERATION, MAINTENANCE AND MANAGEMENT.

PERSONAL AUTHOR: WATT, M. H.

DESCRIPTOR: *CURRICULUM; HYDROLOGY; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; TECHNOLOGY; *WATER SUPPLY; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 89P. PB83-108514

ABSTRACT: A CURRICULUM WAS DEVELOPED FOR WATER SUPPLY AND WASTEWATER OPERATION/MAINTENANCE/MANAGEMENT, AND IS PRESENTED IN TWO PARTS: (1) KEY WATER QUALITY COURSES; (2) ACADEMIC INFORMATION TO SUPPORT THE WATER RESOURCES COURSES. THE DESCRIPTION OF THE WATER QUALITY COURSES INCLUDES UPDATES AND REVISIONS; THE COURSES SEPARATELY ADDRESS THE CHEMICAL ANALYSIS OF WATER, PROPERTIES OF FRESH WATER, WATER QUALITY MANAGEMENT, WASTEWATER TECHNOLOGY, AND HYDROLOGY. ACADEMIC SUPPORT INFORMATION PROVIDED COVERS AN INVENTORY OF LABORATORY EQUIPMENT, LISTS OF REFERENCE TEXTS AND AUDIO-VISUAL MATERIAL USEFUL TO WATER RESOURCES TRAINING, AND A SURVEY OF EMPLOYMENT OPPORTUNITIES FOR WATER TREATMENT PLANT OPERATORS IN THE METROPOLITAN WASHINGTON, DC AREA. THE RESULTS OF THIS EFFORT SERVE TO REVITALIZE A TWO-YEAR WATER QUALITY ACADEMIC CURRICULUM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008773

PUBLICATION DATE: JUN 83

TITLE: IDENTIFICATION, EVALUATION, AND CONTROL OF TOXIC SUBSTANCES IN INDUSTRIAL EFFLUENTS: PRELIMINARY PROCEEDINGS OF WORKSHOP.

PERSONAL AUTHOR: PRATT, GLENN D.; AND OTHERS

DESCRIPTOR: *CASE HISTORIES; *CONFERENCE PROCEEDINGS; *CONTROL; *EVALUATION; *INDUSTRIAL EFFLUENTS; *IDENTIFICATION; PAPERS; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT; WORKSHOPS

DESCRIPTIVE NOTE: 303P. PB83-115 360

ABSTRACT: PREPARED PAPERS OF THE SPEAKERS AT THE WORKSHOP ON THE IDENTIFICATION, EVALUATION, AND CONTROL OF TOXIC SUBSTANCES IN INDUSTRIAL EFFLUENTS, HELD AT THE CONRAD HILTON HOTEL; CHICAGO, ILLINOIS, ON JUNE 15-16, 1982. THE WORKSHOP WAS DESIGNED FOR ACADEMIA, INDUSTRY, AND GOVERNMENT AND FOCUSED ON THE SURFACING, EVALUATION, AND CONTROL OF TOXIC SUBSTANCES IN WASTEWATER DISCHARGES. THE TECHNICAL PRESENTATIONS FEATURED ACTUAL CASE HISTORIES ON THE USE OF DETAILED MANUFACTURING PROCESS EVALUATION TO SURFACE TOXICANTS, THE USE OF MANUFACTURING PROCESS MODIFICATION TO ELIMINATE OR REDUCE THE FORMATION OF TOXICANTS, AND THE ANALYSIS OF CHEMICAL STRUCTURE/ACTIVITY RELATIONSHIPS TO PREDICT THE POTENTIAL FOR TOXICITY, PERSISTANCE, BIOACCUMULATION, MUTAGENICITY, ETC.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008774

PUBLICATION DATE: OCT 82

TITLE: WASTE HEAT UTILIZATION. 1979-AUGUST, 1982 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; DESALINATION; *ENERGY CONSERVATION; *HEATING; INDUSTRY; IRRIGATION; ODOR CONTROL; *RESEARCH REPORTS; *WASTE HEAT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 320P. PB83-800219

ABSTRACT: WORLDWIDE RESEARCH OF WASTE HEAT UTILIZATION FROM INDUSTRIAL PROCESS PLANTS, ELECTRIC POWER PLANTS, BUILDINGS, AND INCINERATION OF WASTES IS COVERED. EMPHASIS IS ON ENERGY CONSERVATION IN INDUSTRIAL PLANTS. STUDIES OF WASTE HEAT BOILERS AND THE USE OF WASTE HEAT FOR IRRIGATION, SEWAGE TREATMENT, ODOR CONTROL, DESALINATION, AND HEATING ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 313 CITATIONS, 70 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008775

PUBLICATION DATE: OCT 82

TITLE: WATER RESOURCE INVESTIGATIONS FOR TROPICAL REGIONS. 1977-OCTOBER, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *DEVELOPMENT; GROUNDWATER; *NATURAL RESOURCES; *RESEARCH REPORTS; RUNOFF; *TROPICS; *WATER RESOURCES; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 194P. PB83-851899

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING TROPICAL REGION WATER RESOURCES. THE CITATIONS COVER PRECIPITATION, RUNOFF, SURFACE WATER, GROUND WATER, AND THE ASSOCIATED EFFECTS ON WATER SUPPLY, PLANT LIFE, WATER QUALITY, AND AQUATIC FAUNA. SUBJECT MATTER IS BOTH GENERAL, SUCH AS RAINFALL AND RUNOFF MODELS, AND SPECIFIC, SUCH AS STUDIES OF SPECIFIC LAKES OR WATERSHEDS. SOME CITATIONS COVER WATER-RELATED RESOURCE DEVELOPMENT STUDIES. (CONTAINS 125 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008776

PUBLICATION DATE: AUG 81

TITLE: TECHNICAL MANUAL MD-10176, ISSUE 1, ENVIRONMENTAL ASSESSMENT AND PLANNING SECTION: QUALITY CONTROL MANUAL.

PERSONAL AUTHOR: HILL, H. N.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ENVIRONMENTAL ASSESSMENT; *LABORATORY PRACTICES; *ORGANIZATION; *QUALITY CONTROL; *PLANNING; *RADIATION; *TECHNICAL MANUALS

DESCRIPTIVE NOTE: 66P. DE82015896

ABSTRACT: THIS MANUAL COVERS ALL DOCUMENTATION AND LABORATORY PRACTICES AT THE MOUND FACILITY. APPENDICES COVER ORGANIZATIONAL CHART OF ENVIRONMENTAL ASSESSMENT AND PLANNING SECTION; ROUTINE ANALYTICAL PROCEDURES; LOG BOOKS; AND SAMPLING AND ANALYSIS SCHEDULE FOR RADIOACTIVITY. (ERA CITATION 07:058182)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008777

PUBLICATION DATE: AUG 81

TITLE: BIODEGRADABILITY TESTING OF INDUSTRIAL WASTES AND INTRACTABLE SUBSTANCES.

PERSONAL AUTHOR: DREWS, R. J. L. C.

DESCRIPTOR: *ACTIVATED SLUDGE; *BIODEGRADABILITY; *BIOFILTERS; *GUIDES; *INDUSTRIAL WASTES; *ORGANIC PRODUCTS; *WASTE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 34P. PB83-106732

ABSTRACT: THE PHENOMENAL INCREASE IN THE RANGE OF SYNTHETIC PRODUCTS PRESENTLY AVAILABLE NECESSITATES RELIABLE METHODS TO DETERMINE THE BIODEGRADABILITY OF ORGANIC PRODUCTS AND INDUSTRIAL WASTES THAT ARE DISPOSED OF TO THE ENVIRONMENT. THIS GUIDE DEALS WITH VARIOUS METHODS DESCRIBED IN THE LITERATURE AND SUPPLIES PARTICULARS OF THREE SELECTED METHODS, BASED ON ACTIVATED SLUDGE OR BIOFILTER PRINCIPLES. BIODEGRADABILITY IS DEFINED AND THE MEANING AND COMPLICATIONS OF BIOLOGICAL BREAKDOWN REACTIONS AND METHODS OF TESTING ARE BRIEFLY EXPLAINED. THE DIFFERENT PARAMETERS THAT CAN BE USED TO MEASURE THE EXTENT OF BREAKDOWN ARE ENUMERATED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008778

PUBLICATION DATE: JUL 82

TITLE: MANAGEMENT OF ON-SITE AND SMALL COMMUNITY WASTEWATER SYSTEMS.

PERSONAL AUTHOR: CIOTOLI, PETER A.; WISWALL, KENNETH C.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *GUIDES; *MANAGEMENT; *ONSITE TREATMENT; *RURAL AREAS; *SMALL FLOWS; *WASTEWATER TREATMENT; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 241P. PB82-260829

ABSTRACT: THE DOCUMENT REPRESENTS A RELATIVELY SIMPLE, YET COMPREHENSIVE GUIDE TO SMALL COMMUNITIES AND THEIR ENGINEERS TO DEVELOP AN EFFECTIVE AND, HOPEFULLY, OPTIMAL MANAGEMENT PROGRAM FOR ALTERNATIVE TECHNOLOGIES WHICH ARE APPROPRIATE TO SOLVING THEIR WASTEWATER POLLUTION PROBLEMS. ALTHOUGH IT IS PREPARED TO RESPOND TO THE REQUIREMENTS OF THE U.S. EPA CONSTRUCTION GRANTS PROGRAM, THE TEXT IS APPLICABLE TO ALL EXISTING SMALL COMMUNITIES WISHING TO OPTIMIZE THE PERFORMANCE OF EXISTING OR PLANNED ON-SITE OR SMALL COMMUNITY WASTEWATER TREATMENT AND DISPOSAL SYSTEMS. BY PRESENTING OPTIMUM MANAGEMENT PROGRAM SELECTION IN A SIMPLE STEP-BY-STEP FASHION, THIS GUIDE PERMITS THE USER TO DESIGN THE APPROPRIATE PROGRAM BASED ON TECHNICAL PROCESSES AND PHYSICAL, ECONOMIC AND ADMINISTRATIVE CONSTRAINTS EXTANT IN THE SERVICE AREA.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008779

PUBLICATION DATE: SEP 82

TITLE: SEPTIC TANK AND HOUSEHOLD SEWAGE SYSTEMS DESIGN AND USE. 1970-AUGUST 1982 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *DESIGN; *HOMES; *HOUSEHOLD SEWAGE; *ONSITE TREATMENT; *SEPTIC TANKS; *SOILS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 220P. PB82-811373

ABSTRACT: THE BIBLIOGRAPHY PROVIDES WORLDWIDE RESEARCH REPORTS ON SEPTIC TANKS AND OTHER SEWAGE TREATMENT UNITS USED FOR HOUSEHOLD SEWAGE SYSTEMS. CONSTRUCTION MATERIALS, DESIGN, SERVICE LIFE, AND A COMPARISON OF SYSTEMS ARE DESCRIBED. THE SUITABILITY OF SOILS FOR DRAINAGE AND ADSORPTION TO PREVENT POLLUTION OF GROUND WATER FROM BACTERIA AND VIRUSES ARE DISCUSSED. PURIFICATION PROCESSES AND THE ENVIRONMENTAL CONSTRAINTS OF DISPOSAL SYSTEMS ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 210 CITATIONS, 16 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008780

PUBLICATION DATE: JUN 82

TITLE: MANUAL OF PRACTICE - CHEMICAL TREATING AGENTS IN OIL SPILL CONTROL.

PERSONAL AUTHOR: CASTLE, R. W.; AND OTHERS

DESCRIPTOR: *CHEMICALS; *INSTRUCTIONAL MATERIALS; *MANUALS; *OIL SPILLS; *OIL SPILL CONTROL; *OIL SPILL TREATMENT; *POLLUTION CONTROL

DESCRIPTIVE NOTE: 152P. PB82-255837

ABSTRACT: THE PURPOSE OF THIS MANUAL IS TO PROVIDE THE ON-SCENE COORDINATOR (OSC) WITH A SYSTEMATIC METHODOLOGY CONSISTENT WITH NATIONAL POLICY THAT CAN BE USED TO ASSESS THE CASE-BY-CASE ACCEPTABILTIY OF OIL SPILL TREATMENT USING CHEMICALS, AND TO DETERMINE APPROPRIATE APPLICATION PROCEDURES. IT CONTAINS GUIDELINES FOR EVALUATING SPILL SAFETY, DETERMINATION OF RELEVANT SPILL CHARACTERISTICS, PREDICTION OF TREATED AND NON-TREATED SPILL MOVEMENT, AND CRITERIA FOR COMPARISON OF PROBABLE IMPACTS WITH AND WITHOUT TREATMENT. DISPERSION OF OIL AT SEA, DISPERSION ON THE SHORELINE, AND THE USE OF SURFACE COLLECTING AGENTS ARE CONSIDERED. THE MANUAL ADDITIONALLY DESCRIBES GENERAL CHEMICAL AGENT APPLICATION PROCEDURES AND DOSAGE REGULATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008781

PUBLICATION DATE: SEP 82

TITLE: STRIP MINING: IMPACTS ON WATER RESOURCES. 1977-SEPTEMBER, 1982. (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; HYDRAULICS; *MINING; LAND RECLAMATION; *LAND USE; *RESEARCH REPORTS; RUNOFF; *STRIP MINING; *WATER RESOURCES; *WATER QUALITY

DESCRIPTIVE NOTE: 94P. PB82-875071

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING STRIP MINE WASTES AND THE EFFECT ON WATER RESOURCES. THE STUDIES ARE BOTH GENERAL, INVESTIGATING THE HYDRAULICS OF WASTES AND RUNOFF, AND SPECIFIC, REPORTING ON RESULTS OF SURVEYS AT SOME STRIP MINES. SOME CITATIONS REFERENCE LAND RECLAMATION TECHNIQUES AND EFFORTS. (CONTAINS 58 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008782

PUBLICATION DATE: 82

TITLE: PREPARATION OF COMPUTER DATA BASES FOR ENVIRONMENTAL PROTECTION.

PERSONAL AUTHOR: OHNESORGE, W. F.; AND OTHERS

DESCRIPTOR: *COMPUTER PROGRAMS; *COMPUTER APPLICATIONS; *DATABASES; *ENVIRONMENT; *ENVIRONMENTAL PROTECTION; *DOCUMENTATION; *PLANNING; *PROGRAMMING; *TESTING

DESCRIPTIVE NOTE: 4P. DE82013441

ABSTRACT: ORGANIZATIONS WHICH HANDLE MASSIVE AMOUNTS OF ENVIRONMENTAL DATA MUST USE COMPUTER DATA BASES TO KEEP RECORD COSTS AS LOW AS PRACTICABLE AND TO MAKE POSSIBLE THE EFFICIENT AND TIMELY ASSESSMENT OF THE ENVIRONMENT. THIS PAPER REVIEWS THE BASIC STEPS NECESSARY FOR PLANNING, PROGRAMMING, TESTING AND DOCUMENTATION OF A COMPUTER PROGRAM. (ERA CITATION 07:044717)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008783

PUBLICATION DATE: AUG 82

TITLE: COST-EFFECTIVE PRETREATMENT PROGRAMS.

PERSONAL AUTHOR: ROSSMAN, LEWIS A.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *COSTS; *METALS; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); PLANNING; *PRETREATMENT; *STANDARDS; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 17P. PB82-261439

ABSTRACT: A METHOD IS DEVELOPED FOR PLANNING COST-EFFECTIVE CONTROL PROGRAMS FOR TOXIC POLLUTANTS IN MUNICIPAL TREATMENT SYSTEMS. IT CHOOSES THE LEVELS OF INDUSTRIAL PRETREATMENT AND TYPE OF MUNICIPAL SEWAGE TREATMENT A CITY CAN USE SO THAT ALL APPLICABLE STANDARDS AND CRITERIA ON SEWER DISCHARGES, RECEIVING WATER QUALITY, AND MUNICIPAL SLUDGE QUALITY ARE MET AT MINIMUM COST. THE PROBLEM IS FORMULATED AS A NONLINEAR 0-1 INTEGER PROGRAMMING MODEL. AN IMPLICIT ENUMERATION PROCEDURE IS DEVELOPED FOR ITS SOLUTION. THE METHOD IS APPLIED TO CONTROL OF FIVE HEAVY METALS IN KOKOMO, IND. THE ECONOMIC IMPACT OF EPA'S NATIONAL PRETREATMENT POLICIES AND ALTERNATIVE WATER QUALITY GOALS IS STUDIED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008784

PUBLICATION DATE: 82

TITLE: AN ALGAL ASSAY TECHNIQUE FOR AQUATIC TOXICANTS.

PERSONAL AUTHOR: WANG, WUNCHENG

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ALGAE; *LABORATORY PROCEDURES; *RESEARCH REPORTS; *TOXIC SUBSTANCES; *ZINC ACETATE

DESCRIPTIVE NOTE: 36P. PB82-262908

ABSTRACT: A TECHNIQUE WAS DEVELOPED FOR ALGAL TOXICITY ASSAYS. ALGAL COMMUNITIES OBTAINED FROM SEVERAL SEWAGE TREATMENT PLANTS AND SURFACE WATERS WERE THE TEST SPECIMENS. THE TOXICANT USED WAS ZINC ACETATE. THE TECHNIQUES THAT WERE DEVELOPED ARE RELATIVELY SIMPLE, RAPID, AND PRECISE. ALGAL RESPONSES TO TOXICANTS WERE MEASURED BY CHANGES IN OXYGEN PRODUCTION, AND TWO TYPES OF RESPONSES WERE OBSERVED. THE VARIATIONS IN RESPONSE ARE CAUSED PRIMARILY BY THE DEGREE OF PRIOR ACCLIMATION OF THE ALGAE TO THE TOXICANT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008785

PUBLICATION DATE: SEP 82

TITLE: BIODEGRADATION OF TOXIC PULPING EFFLUENTS. 1972-SEPTEMBER, 1982 (CITATIONS FROM THE INSTITUTE OF PAPER CHEMISTRY DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *BIODEGRADATION; *BIOTREATMENT; *EFFLUENTS; LABORATORY PROCEDURES; POLLUTANTS; *PULP MILLS; *RESEARCH REPORTS; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 129P. PB82-853433

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING PROBLEMS, RESOLUTIONS, AND EVALUATIONS OF BIOTREATMENT OF BIODEGRADABLE TOXIC EFFLUENTS FROM PULP MILLS. MUTAGENIC CHARACTERISTICS OF WASTE FROM CHLORINATION OF MOST PULPS ARE DISCUSSED RELATIVE TO THE RISKS INVOLVED TO WATER PLANT AND ANIMAL LIFE. LABORATORY MEASUREMENTS DETERMINING TOXICITY OF EFFLUENTS AND VARIOUS INDUSTRIAL BIODEGRADATION PROCESSES ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 86 CITATIONS, 22 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008786

PUBLICATION DATE: JUL 82

TITLE: THE IMPACT OF AQUATIC PLANTS AND THEIR MANAGEMENT TECHNIQUES ON THE AQUATIC RESOURCES OF THE UNITED STATES: AN OVERVIEW.

PERSONAL AUTHOR: SHIREMAN, JEROME V.; AND OTHERS

DESCRIPTOR: *AQUATIC PLANTS; *AQUATIC RESOURCES; *ENVIRONMENTAL IMPACT; *MANAGEMENT; *RESEARCH REPORTS

DESCRIPTIVE NOTE: 157P. PB82-262890

ABSTRACT: THIS PAPER PROVIDES AN ASSESSMENT OF NUISANCE AQUATIC PLANTS AND THE PROBLEMS ASSOCIATED WITH THEIR CONTROL IN THE UNITED STATES. MAJOR EMPHASIS IS GIVEN TO THE SUN BELT STATES WHERE AQUATIC PLANT CONTROL IS CRITICAL DUE TO INTRODUCTION OF EXOTIC PLANTS AND EXTENDED GROWING SEASONS. THE IMPACT AQUATIC PLANTS (ALGAE, NON-NATIVE, AND NATIVE PLANTS) AND THEIR MANAGEMENT TECHNIQUES ARE DISCUSSED AS THEY PERTAIN TO WATER QUALITY AND AQUATIC LIFE. HERBICIDE RESIDUE DATA, BOTH IN THE SOIL AND WATER, AND HERBICIDE TOXICITY TO AQUATIC ORGANISMS ARE PRESENTED AND DISCUSSED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008787

PUBLICATION DATE: AUG 82

TITLE: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT MANAGEMENT SYSTEM: PILOT SYSTEM DESCRIPTION.

PERSONAL AUTHOR: MESSENGER, M.; AND OTHERS

DESCRIPTOR: *U.S. ARMY; *EFFLUENTS; *MANAGEMENT SYSTEMS; *NPDES PERMITS; *PILOT PROJECTS; *POINT SOURCE DISCHARGES; *WASTEWATER TREATMENT; *WASTEWATER DISCHARGE

DESCRIPTIVE NOTE: 22P. AD-A119 787/0

ABSTRACT: THE CLEAN WATER ACT OF 1977 AND ARMY REGULATION 200-1 REQUIRE ARMY INSTALLATIONS TO CONTROL THE QUALITY OF THEIR POINT-SOURCE WASTEWATER EFFLUENTS. POINT-SOURCE DISCHARGES ARE CONTROLLED BY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS; EACH WASTEWATER POINT DISCHARGING INTO A NAVIGABLE WATERWAY IS REGULATED EITHER BY A FEDERAL OR STATE NPDES PERMIT. THE DEPARTMENT OF THE ARMY HAS BEEN ISSUED HUNDREDS OF NPDES PERMITS. THE REPORT DESCRIBES A PILOT NPDES PERMIT MANAGEMENT SYSTEM DEVELOPED BY THE U.S. ARMY CONSTRUCTION ENGINEERING RESEARCH LABORATORY (CERL). THIS PROGRAM ALLOWS THE ARMY TO RETRIEVE FROM A CENTRAL DATA BASE A PERMANENT, CONTINUALLY UPDATED INVENTORY OF THE ARMY'S WASTEWATER EFFLUENT DISCHARGE SELF-MONITORING INFORMATION AND ASSOCIATED NPDES PERMIT DATA. THIS SYSTEM ALSO LETS THE ARMY AGGREGATE, MANIPULATE, AND ANALYZE THE DATA BASE INFORMATION. THIS REPORT GIVES A BRIEF BACKGROUND OF THE PILOT SYSTEM'S DEVELOPMENT, SUGGESTS HOW THE SYSTEM CAN BE USED TO HELP MANAGE THE ARMY'S POLLUTION ABATEMENT PROGRAM, AND GIVES DETAILED USER INSTRUCTIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008788

PUBLICATION DATE: JUL 82

TITLE: MANGROVES: A GUIDE FOR PLANNING AND MAINTENANCE.

PERSONAL AUTHOR: STEVELY, JOHN; RABINOWITZ, LARRY

DESCRIPTOR: *BIOLOGY; *FLORIDA; *GUIDES; *MANGROVES; *MAINTENANCE; *PLANTING

DESCRIPTIVE NOTE: 10P. PB83-115519

ABSTRACT: THE REPORT IS A GUIDE FOR PLANTING AND MAINTENANCE OF MANGROVES. THE REPORT DESCRIBES THE BIOLOGY OF THE MANGROVES; IDENTIFICATION OF FLORIDA MANGROVES; PLANTING, TRANSPLANTING, PRUNING; AND PLANT PROGRATION OF MANGROVES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008789

PUBLICATION DATE: JUL 82

TITLE: GROUNDWATER MANAGEMENT STRATEGY FOR MICHIGAN: DRAFT RESPONSE AND INCIDENT TRACKING PROCEDURES.

DESCRIPTOR: *CONTAMINATION; *GROUNDWATER; *MANAGEMENT; *MICHIGAN; *POLLUTION CONTROL; *RESPONSE PROCEDURES; *TRACKING PROCEDURES; *WATER RESOURCES; *WATER QUALITY

DESCRIPTIVE NOTE: 19P. PB83-116087

ABSTRACT: SEVERAL MANAGEMENT TOOLS ARE NEEDED TO GUIDE STATE RESPONSE TO INCIDENTS OF GROUND-WATER POLLUTION BECAUSE OF THE LARGE NUMBER OF INCIDENTS AT WHICH STATE RESPONSE ACTIONS MAY NEED TO BE PERFORMED. TWO PRIMARY MANAGEMENT TOOLS ARE DESCRIBED IN THIS DOCUMENT. THESE MANAGEMENT TOOLS ARE: GENERAL RESPONSE PROCEDURES - GUIDANCE AS TO HOW AND WHEN STATE ACTIONS ARE INITIATED IN REPONSE TO INCIDENTS OF GROUNDWATER POLLUTION CONCERN; AND INCIDENT TRACKING PROCEDURES - AN INFORMATION MANAGEMENT SYSTEM TO FACILITATE THE RECORDING, TRACKING AND DISTRIBUTION OF INFORMATION ON THE STATUS OF EACH CONTAMINATION INCIDENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008790

PUBLICATION DATE: FEB 82

TITLE: THE USE OF PLASTICS AND RUBBER IN WATER AND EFFLUENTS (JOINT CONFERENCE 15 FEBRUARY TO 17 FEBRUARY 1982 HELD AT THE ROYAL LANCASTER HOTEL, LONDON).

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *DEVELOPMENT; *EFFLUENTS; *EQUIPMENT; *MATERIALS; *PIPES; *PLASTICS; *RUBBER; *TECHNOLOGY; *WATER; *WASTEWATER

DESCRIPTIVE NOTE: 324P. PB83-116160

ABSTRACT: TOPICS DISCUSSED INCLUDE: PROBLEMS AND ANSWERS WITH PIPELINE SYSTEMS, MATERIALS AND EQUIPMENT, AND OTHER USES AND NEW DEVELOPMENTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008791

PUBLICATION DATE: MAY 82

TITLE: URBAN RUNOFF QUALITY: INFORMATION NEEDS.

PERSONAL AUTHOR: FIELD, RICHARD

DESCRIPTOR: *INFORMATION NEEDS; *MODELS; *RUNOFF; *SURFACE RUNOFF; *URBAN AREAS; *WATER QUALITY

DESCRIPTIVE NOTE: 181P. PB83-117002

ABSTRACT: THE DISCUSSION PAPER COMMENTS ON AN ARTICLE DEALING WITH PERCEPTIONS OF URBAN RUNOFF WATER QUALITY MODELS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008792

PUBLICATION DATE: 82

TITLE: EFFECTS OF TOXICANT ON PLANKTON.

PERSONAL AUTHOR: WALSH, GERALD E.

DESCRIPTOR: *ENVIRONMENTAL IMPACTS; *INDUSTRIAL WASTES; *METALS; *MUNICIPAL WASTES; *PESTICIDES; *PLANKTON; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 70P. PB83-117044

ABSTRACT: EFFECTS OF HEAVY METALS, PESTICIDES, AND INDUSTRIAL AND MUNICIPAL WASTES ON PLANKTON IN THE FIELD AND LABORATORY ARE REVIEWED. BOTH HOLOPLANKTON AND MEROPLANKTON ARE DISCUSSED. IN MANY CASES, MEROPLANKTONIC STAGES OF BENTHIC SPECIES ARE MORE SENSITIVE THAN ADULTS ALTHOUGH DEATH OR DEPRESSION OF PHYSIOLOGICAL ACTIVITIES ARE OFTEN USED AS CRITERIA FOR EFFECTS OF POLLUTANTS WITH ALGAE AND ANIMALS, ALGAE MAY BE USED TO DETECT EFFECTS OF GROWTH STIMULANTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008793

PUBLICATION DATE: MAY 82

TITLE: DESIGN AND INSTALLATION OF LOW-PRESSURE PIPE WASTE TREATMENT SYSTEMS.

PERSONAL AUTHOR: COGGER, CRAIG; AND OTHERS

DESCRIPTOR: *DESIGN; *INSTALLATION; *LOW-PRESSURE PIPES; *MAINTENANCE; *NORTH CAROLINA; *OPERATIONS (WASTEWATER); *SITING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 38P. PB83-118091

ABSTRACT: MANY SITES UNDER CONSIDERATION FOR DEVELOPMENT IN NORTH CAROLINA ARE NOT SUITABLE FOR ON-SITE SEWAGE DISPOSAL BY CONVENTIONAL SEPTIC SYSTEMS. AMONG THESE SITES ARE SOME WHICH DO HAVE ENOUGH DEPTH AND AREA OF USABLE SOIL TO PROVIDE SAFE DISPOSAL VIA LOW-PRESSURE PIPE (LPP) SYSTEMS. THIS MANUAL SPECIFIES THE PROCEDURES AND MATERIALS TO BE USED FOR SUCCESSFUL SITING, DESIGN, INSTALLATION AND MAINTENANCE OF RESIDENTIAL LPP SYSTEMS. USE OF PROPER MATERIALS AND TECHNIQUES IS CRITICAL TO THE SUCCESS OF THE LPP, AS WELL AS TO ALL OTHER GROUND ABSORPTION SYSTEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008794

PUBLICATION DATE: NOV 82

TITLE: WASTEWATER TREATMENT. JUNE, 1970-NOVEMBER, 1982. (CITATIONS FROM THE ENGINEERING INDEX DATA BASE.)

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *EFFLUENTS; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *RECYCLING; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 141P. PB83-852681

ABSTRACT: THIS BIBLIOGRAPHY COVERS METHODS AND TECHNOLOGY FOR THE TREATMENT AND PURIFICATION OF INDUSTRIAL EFFLUENTS AND THE RECYCLING OF VARIOUS EFFLUENT COMPONENTS. EFFLUENTS FROM MINING AND RELATED ACTIVITIES ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 143 CITATIONS, 17 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008795

PUBLICATION DATE: NOV 82

TITLE: POLLUTION FROM ALASKAN OIL AND GAS OPERATIONS. 1974-NOVEMBER, 1982 (CITATIONS FROM OCEANIC ABSTRACTS).

DESCRIPTOR: *ALASKA; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ENVIRONMENTAL IMPACTS; *GAS; *LEGAL ASPECTS; *OIL; *POLLUTION

DESCRIPTIVE NOTE: 67P. PB83-852822

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING ENVIRONMENTAL POLLUTION MECHANISMS AND EFFECTS ASSOCIATED WITH ALASKAN OIL AND GAS OPERATIONS. EFFECTS AT SPECIFIC LOCATIONS AND UPON SPECIFIC SPECIES ARE CONSIDERED. SOME ATTENTION IS GIVEN TO LEGAL ASPECTS OF OIL SPILLS AND OTHER OIL POLLUTION SOURCES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 66 CITATIONS, 12 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008796

PUBLICATION DATE: JUN 81

TITLE: THE QUALITY OF SCIENTIFIC CONSIDERATIONS IN DECISIONS AFFECTING THE ENVIRONMENT.

PERSONAL AUTHOR: SEWELL, GRANVILLE H.

DESCRIPTOR: *DECISION MAKING; *ENVIRONMENTAL EFFECTS; *ENVIRONMENTAL IMPACT STATEMENTS; *EVALUATION; *RESEARCH REPORTS; *SURVEYS

DESCRIPTIVE NOTE: 96P. PB83-114371

ABSTRACT: THE SUBSTANTIVE QUALITY OF ENVIRONMENTAL IMPACT STATEMENTS (EIS) WAS EXAMINED TO DETERMINE THEIR USEFULNESS IN SUPPORTING AND INFLUENCING DECISION MAKING. THE FOLLOWING TASKS ACCOMPLISHED TO CARRY OUT THIS STUDY ARE DESCRIBED: (1) A RETROSPECTIVE SURVEY OF ACTIONS THAT FOLLOWED THE FILING OF 100 FINAL EISS IN LATE 1973; (2) FIELD STUDIES OF ENVIRONMENTAL IMPACTS FROM ACTIONS RELATED TO TEN OF THESE FINAL EISS; (3) GRADING OF SCIENTIFIC QUALITY FOR 10 EISS BY A PANEL OF THREE SCIENTISTS; (4) A SURVEY OF 100 FINAL EISS FILED IN LATE 1980 UNDER NEW REGULATIONS PROMULGATED BY THE COUNCIL ON ENVIRONMENTAL QUALITY IN LATE 1979; AND (5) GRADING OF SCIENTIFIC QUALITY OF 20 OF THESE EISS BY THE SCIENCE PANEL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008797

PUBLICATION DATE: 81

TITLE: AREAWIDE ENVIRONMENTAL ASSESSMENT: GUIDEBOOK.

DESCRIPTOR: *AREAWIDE ASSESSMENT; *ASSESSMENT TECHNIQUES; *ENVIRONMENTAL ASSESSMENT; *GUIDEBOOKS; *PLANNING

DESCRIPTIVE NOTE: 246P. PB83-123703

ABSTRACT: THIS TECHNICAL GUIDANCE DOCUMENT PROVIDES INFORMATION FOR ENVIRONMENTAL ANALYSTS, PLANNERS, AND ENGINEERS CHARGED WITH THE PREPARATION OF AREAWIDE ENVIRONMENTAL ASSESSMENT. THE DISCUSSION COVERS THE OVERALL AREAWIDE ASSESSMENT METHODOLOGY, PROBLEMS WHICH WILL GENERALLY BE ENCOUNTERED IN APPLYING THE METHODOLOGY, ENVIRONMENTAL ISSUES TYPICALLY POSED AT THE AREAWIDE SCALE, DATA SOURCES AND ANALYSIS TECHNIQUES FOR DEALING WITH THOSE ISSUES, AND DOCUMENTATION TECHNIQUES FOR SYNTHESIZING AND PRESENTING THE RESULTS OF AN ASSESSMENT STUDY. AREAWIDE ENVIRONMENTAL ASSESSMENT IS COMPARED TO PROJECT - LEVEL ASSESSMENT AND THE ADVANTAGES OF THE FORMER ARE IDENTIFIED. THE ASSESSMENT METHODOLOGY IS DETAILED IN SEVEN STEPS, RANGING FROM DETERMINING THE NEED AND FEASIBILITY OF

PREPARING AN AREAWIDE ASSESSMENT, THROUGH ESTABLISHING AREA BOUNDARIES AND SPACIALLY ALLOCATING AREAWIDE ALTERNATIVES, TO SCOPING ANALYSIS, IMPACT SYNTHESIS, EVALUATION, AND RECOMMENDATIONS. ASSESSMENT TECHNIQUES COMPRISE A 21 - ITEM LIST, INCLUDING LAND DEVELOPMENT SUITABILITY, VOLCANIC AND TECTONIC ACTIVITY, WATER SUPPLY AND QUALITY, FIRE HAZARDS, AIR QUALITY, NOISE, ENERGY, SOCIAL CONDITION, AND HISTORIC AND ARCHEOLOGICAL RESOURCES. USE OF CENSUS DATA, MAPS, AND REMOTE SENSING TECHNIQUES FOR DATA ACQUISITION AND ANALYSIS IN ESTABLISHING AN AREAWIDE DATA BASE ARE DISCUSSED. MAPS, TABULAR AND GRAPHIC DATA ARE PROVIDED. APPENDICES INCLUDE A LEGAL/ADMINISTRATIVE FRAMEWORK FOR AREAWIDE ASSESSMENT AND DOCUMENTATION AND DESCRIPTION OF ALTERNATIVES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008798

PUBLICATION DATE: 82

TITLE: HANDBOOK ON THE BISCAYNE AQUIFER: WATER MANAGEMENT, WATER CONSERVATION, HEALTH AND COST OF DRINKING WATER.

PERSONAL AUTHOR: BLACKWELDER, BRION; AND OTHERS

DESCRIPTOR: *COSTS; *CONSERVATION; *DRINKING WATER; *FLORIDA; *HANDBOOKS; *MANAGEMENT; *NATURAL RESOURCES; *PUBLIC HEALTH; *WATER CONSERVATION; *WATER RESOURCES

DESCRIPTIVE NOTE: 192P. PB83-118539

ABSTRACT: INFORMATION IS PRESENTED FROM SCIENTISTS, PLANNERS, AND CITIZENS CONCERNING WATER RESOURCES IN SOUTHEAST FLORIDA. LOCAL GROUNDWATER AND THE EVERGLADES-OKEECHOBEE SYSTEM ARE DESCRIBED AND POLLUTION OF LOCAL GROUNDWATER, WATER CONSUMPTION BY URBAN AND AGRICULTURAL AREAS, METHODS OF WATER CONSERVATION INSIDE AND OUTSIDE THE HOME, AND THE SHARING OF WATER RESOURCES WITH NATURAL SYSTEMS ARE DISCUSSED. THE PROBLEMS OF GROWTH AND WATER SUPPLY ARE ASSESSED, AS ARE WATER STANDARDS, ESPECIALLY THOSE RELATING TO CARCINOGENS SUCH AS TRIHALOMETHANES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008799

PUBLICATION DATE: SEP 82

TITLE: HANDBOOK FOR SAMPLING AND SAMPLE PRESERVATION OF WATER AND WASTEWATER.

PERSONAL AUTHOR: BERG, EDWARD L.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *HANDBOOKS; *LABORATORY PROCEDURES; *SAMPLING; *SAMPLE PRESERVATION; *STATISTICS; *WATER; *WASTEWATER

DESCRIPTIVE NOTE: 416P. PB83-124503

ABSTRACT: THE FOUR BASIC FACTORS WHICH AFFECT THE QUALITY OF ENVIRONMENTAL DATA ARE SAMPLE COLLECTION, PRESERVATION, ANALYSES, AND DATA RECORDING. IMPROPER ACTION IN ANY ONE OF THESE AREAS WILL RESULT IN POOR DATA FROM WHICH POOR JUDGEMENTS ARE CERTAIN. THEREFORE, THIS RESEARCH PROGRAM WAS INITIATED TO PROVIDE GUIDANCE IN THE FIRST TWO AREAS, SAMPLE COLLECTION AND PRESERVATION. INFORMATION OBTAINED FROM THE REVIEW OF THE LITERATURE AND THE RESULTS OF A SURVEY OF FIELD PRACTICES PROVIDES THE BASIS FOR GUIDANCE IN GENERAL SAMPLING TECHNIQUES, AUTOMATIC SAMPLERS, FLOW MEASURING DEVICES, A STATISTICAL APPROACH TO SAMPLING, PRESERVATION OF PHYSICAL, CHEMICAL, AND RADIOLOGICAL PARAMETERS, AND SAMPLING PROCEDURES FOR SURFACE WATERS, GROUND AND DRINKING WATER, MUNICIPAL, INDUSTRIAL, AND AGRICULTURE WATERS. FINALLY, THIS HANDBOOK IS NOT INTENDED TO SUPERSEDE SAMPLING, PRESERVATION, OR CHAIN OF CUSTODY PROCEDURES SPECIFIED BY ENFORCEMENT, COMPLIANCE MONITORING, OR PROGRAM OFFICES, BUT RATHER TO COMPLIMENT THEIR REQUIREMENTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROUAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008800

PUBLICATION DATE: JUN 82

TITLE: SITE EVALUATION, DESIGN, OPERATION, AND INSTALLATION OF HOME SEWAGE SYSTEMS IN IOWA.

PERSONAL AUTHOR: BEER, C. E.

DESCRIPTOR: *DESIGN; *EVALUATION; *HOMES; *IOWA; *GROUNDWATER; *MAINTENANCE; *OPERATIONS (WASTEWATER); *ONSITE TREATMENT SYSTEMS; POLLUTION; *SOILS; *WASTEWATER TREATMENT; *WATER RESOURCES

DESCRIPTIVE NOTE: 67P. PB83-125245

ABSTRACT: INVESTIGATIONS WERE CARRIED OUT TO DEVELOP INFORMATION FOR SOLVING PROBLEMS ASSOCIATED WITH THE DESIGN, LOCATION, AND MAINTENANCE OF ON-SITE WASTE TREATMENT SYSTEMS FOR DWELLINGS. THREE SPECIFIC ACTIVITIES WERE UNDERTAKEN. ONE FOCUSED ON THE DEVELOPMENT OF INFORMATION CONCERNING THE ORIGIN, DESCRIPTION, AND CLASSIFICATION OF SOILS, AND ON HOW THE SOIL PROPERTIES/CHARACTERISTICS RELATED TO PROPER SITE EVALUATION FOR OPTIMUM WASTE TREATMENT. A SECOND ACTIVITY EXAMINED IOWA GROUNDWATER DISTRICTS AND ASSESSED THE GEOLOGY AND LOCATION OF THE WATER RESOURCES RELATIVE TO POTENTIAL POLLUTION HAZARDS ASSOCIATED WITH WASTE TREATMENT SYSTEMS. A THIRD STUDY AREA DEVELOPED GUIDANCE FOR SELECTING DESIGN CRITERIA AND CONSTRUCTION METHODS FOR ON-SITE WASTE TREATMENT SYSTEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008801

PUBLICATION DATE: JUL 82

TITLE: DEVELOPMENT OF A COUNTYWIDE MODEL MANAGEMENT ORGANIZATION FOR WASTEWATER.

PERSONAL AUTHOR: BEER, C. E.; MANCI, K. M.

DESCRIPTOR: *IOWA; *MANAGEMENT; *MANAGEMENT DISTRICTS; *ONSITE TREATMENT SYSTEMS; *RURAL AREAS; *SEPTIC SYSTEMS; *SURVEYS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 109P. PB83-125252

ABSTRACT: A MODEL COUNTY ORDINANCE TO ESTABLISH ON-SITE WASTEWATER MANAGEMENT DISTRICTS IN IOWA COUNTIES WAS PREPARED, DISTRIBUTED TO ALL 99 COUNTIES, AND ADOPTED BY GUTHRIE COUNTY, CREATING A MANAGEMENT DISTRICT AT LAKE PANORAMA. BASED ON THE ACCEPTANCE, ACCOMPLISHMENTS, AND FEW DIFFICULTIES EXPERIENCED AT LAKE PANORAMA, PUBLIC MANAGEMENT OF ON-SITE WASTEWATER TREATMENT SYSTEMS IS A WORKABLE, REALISTIC ALTERMATIVE FOR RURAL IOWA. HIGH DENSITY USE OF ON-SITE WASTEWATER WERE ALSO EXAMINED. SEPTIC SYSTEMS WERE INVESTIGATED FOR EVIDENCE OF FAILURE, HOUSE-TO-HOUSE SURVEYS WERE PERFORMED, AND WELLWATER SAMPLES WERE ANALYZED. IT WAS CONCLUDED THAT SEPTIC SYSTEMS CAN OPERATE SATISFACTORILY FOR OVER 20 YEARS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008802

PUBLICATION DATE: SEP 82

TITLE: SAMPLING FREQUENCY - MICROBIOLOGICAL DRINKING WATER REGULATIONS.

PERSONAL AUTHOR: PIPES, WESLEY O.; CHRISTIAN, ROBERT R.

DESCRIPTOR: *COLIFORMS; *CONTAMINATION; *DRINKING WATER; *MICROBIOLOGY; *MODEL DEVELOPMENT; *OPERATIONS (WATER); *REGULATIONS; *SAMPLING

DESCRIPTIVE NOTE: 193P. PB83-127738

ABSTRACT: THE PRIMARY GOAL OF THIS PROJECT WAS TO DEVELOP A SAMPLING MODEL WHICH CAN BE USED TO SPECIFY THE SAMPLING FREQUENCY NEEDED TO DETERMINE COMPLIANCE WITH THE MICROBIOLOGICAL MAXIMUM CONTAMINANT LEVELS OF THE NATIONAL INTERIM PRIMARY DRINKING WATER REGULATIONS. TWO APPROACHES TO MODEL DEVELOPMENT WERE USED. THE EMPERICAL APPROACH WAS BASED ON FITTING COLIFORM DATA TO FREQUENCY DISTRIBUTIONS. THE MECHANISTIC APPROACH WAS AN ATTEMPT TO ANALYZE THE PHYSICAL ELEMENTS OF THE WATER SYSTEM IN ORDER TO DETERMINE IF SAMPLES FROM A PARTICULAR LOCATION ARE REPRESENTATIVE OF WATER QUALITY OVER AN AREA AND IF IT IS MORE LIKELY THAT COLIFORMS WILL BE FOUND IN CERTAIN TYPES OF SAMPLING LOCATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008803

PUBLICATION DATE: NOV 82

TITLE: GROUND WATER POLLUTION: SALINE GROUND WATER. JUNE, 1981-SEPTEMBER, 1982 (CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *GROUNDWATER; HYDROLOGY; IRRIGATION; *RESEARCH; *SALT WATER; SOILS; *WATER SUPPLIES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 47P. PB83-800821

ABSTRACT: THE ABSTRACTS COVER FEDERALLY-FUNDED RESEARCH ON TOPICS DEALING WITH SALINE GROUND WATER: IRRIGATION RETURN FLOW, SOIL STUDIES, HYDROLOGY, AQUIFERS, WATER QUALITY, SALT WATER INTRUSION, AND EFFECTS UPON WATER SUPPLIES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 39 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008804

PUBLICATION DATE: NOV 82

TITLE: AERATION OF SEWAGE LAGOONS, RESERVOIRS, AND STREAMS. AUGUST, 1981-SEPTEMBER, 1982 (CITATIONS FROM THE ENGINEERING INDEX DATA BASE).

DESCRIPTOR: *AERATION; *ANNOTATED BIBLIOGRAPHIES; AGRICULTURAL WASTES; *BIBLIOGRAPHIES; DESIGN; INDUSTRIAL WASTES; *LAGOONS; MUNICIPAL WASTES; *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 42P. PB83-800847

ABSTRACT: THE WORLDWIDE REPORTS CITED IN THIS BIBLIOGRAPHY COVER BOTH SEWAGE AERATION LAGOONS AS WELL AS THE MECHANICAL AERATION OF STREAMS AND RESERVOIRS. THE SECTION ON AERATION LAGOONS COVERS THEIR DESIGN AND PERFORMANCE IN TREATING BOTH MUNICIPAL, INDUSTRIAL, AND AGRICULTURAL WASTES. THE SECOND SECTION COVERS REPORTS ON THE USE OF MECHANICAL AERATORS TO IMPROVE THE WATER QUALITY OF LAKES, RIVERS, AND RESERVOIRS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 34 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008805

PUBLICATION DATE: DEC 82

TITLE: WASTE HEAT UTILIZATION. 1979-OCTOBER, 1982

(CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *ENERGY CONSERVATION; *ENERGY RECOVERY; *HEAT; *HEATING; *DESALINATION; *RESEARCH; *WASTE HEAT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 305P. PB83-801373

ABSTRACT: FEDERALLY-FUNDED RESEARCH ON TECHNIQUES OF RECOVERING WASTE HEAT FROM POWER PLANTS, BUILDINGS, INDUSTRIAL PROCESSES, AND WASTE DISPOSAL IS COVERED. STUDIES OF WASTE HEAT BOILERS AND THE USE OF WASTE HEAT FOR IRRIGATION, SEWAGE TREATMENT, ODOR CONTROL, DESALINATION, HEATING, AND AQUACULTURE ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 273 CITATIONS, 128 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008806

PUBLICATION DATE: DEC 82

TITLE: METAL PROCESSING WASTES: WATER POLLUTION. 1977-OCTOBER, 1982. (CITATIONS FROM THE NTIS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *INDUSTRIAL WASTES; *METALS; *RESEARCH; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 155P. PB83-801407

ABSTRACT: WATER POLLUTION CONTROL, PROCESSES, ABATEMENT PLANNING, ECONOMICS, QUANTITY, AND HEALTH EFFECTS FROM METAL PROCESSING ARE COVERED IN THIS BIBLIOGRAPHY ON METAL REFINING, SMELTING, WORKING, AND FINISHING. (THIS UPDATED BIBLIOGRAPHY CONTAINS 147 CITATIONS, 35 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008807

PUBLICATION DATE: NOV 82

TITLE: SOIL SALINITY: IRRIGATION PRACTICES AND EFFECTS ON CROPS AND GROUNDWATER. 1977-NOVEMBER, 1982 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *CROPS; *GROUNDWATER; *IRRIGATION; *RESEARCH; *SALINITY; *SOILS; *WATER QUALITY

DESCRIPTIVE NOTE: 146P. PB83-854620

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING THE EFFECTS ON CROPS AND GROUNDWATER FROM IRRIGATION WATERS HAVING HIGH SALINITY. THE SALT TOLERANCE OF CROPS, INCLUDING BEANS, WHEAT AND CITRUS FRUITS, ARE EXAMINED. SOIL SALINITY, GROUNDWATER SALINITY, AND RIVER AND STREAM SALINITY ARE DISCUSSED. THE SOURCES OF THE BRACKISH WATER ARE ALSO CONSIDERED. (CONTAINS 104 CITATIONS FULLY INDEXED AND INCLUDING A TITLE LIST.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008809

PUBLICATION DATE: AUG 82

TITLE: USE OF MODELS FOR WATER RESOURCES MANAGEMENT, PLANNING, AND POLICY.

DESCRIPTOR: FEDERAL AGENCIES; *GUIDES; *MANAGEMENT; *MATHEMATICAL MODELS; *MODELING; *MODELS; *PLANNING; *POLICY FORMATION; *STATE-OF-THE-ART REVIEWS; *SURVEYS; *WATER RESOURCES

DESCRIPTIVE NOTE: 27P.

ABSTRACT: THIS ASSESSMENT IS INTENDED AS A GUIDE FOR CONGRESS ON THE POTENTIAL TO DEVELOP AND USE MATHEMATICAL MODELS TO MORE EFFECTIVELY AND EFFICIENTLY ANALYZE THE NATION'S WATER RESOURCE PROBLEMS. POLICY OPTIONS ARE PRESENTED FOR IMPROVING THE USE OF THESE TOOLS WITHIN BOTH FEDERAL AND STATE WATER RESOURCE AGENCIES. THE ASSESSMENT REVIEWS THE CURRENT TECHNICAL CAPABILITIES OF MODELS; THE CURRENT AND POTENTIAL USE OF MODELS BY FEDERAL AND STATE AGENCIES; AND GENERAL IMPEDIMENTS TO EFFECTIVE MODEL DEVELOPMENT, USE, AND DISSEMINATION. IT DRAWS ON THE RESULTS OF SURVEYS OF WATER RESOURCE PROFESSIONALS IN 27 FEDERAL AGENCIES AND OFFICES, FROM ALL 50 STATES, AND FROM UNIVERSITIES AND THE PRIVATE SECTOR.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW008810

TITLE: USE OF THE SPECTRONIC 20 SPECTROPHOTOMETER (XT-51).

DESCRIPTOR: *AUDIOVISUAL AIDS; CHEMISTRY; *CHEMICAL ANALYSES; EQUIPMENT; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; POST SECONDARY EDUCATION; SLIDES; *SCIENCE EQUIPMENT; *SPECTROPHOTOMETRY; *SPECTROPHOTOMETERS

DESCRIPTIVE NOTE: 13P. PRICE: $1.00 PER DOCUMENT PLUS $0.03 PER PAGE.

ABSTRACT: THIS MODULE IS DESIGNED FOR BEGINNING LABORATORY PERSONNEL AND WASTEWATER TREATMENT PLANT OPERATORS. THE MODULE EXPLAINS THE USE OF THE SPECTRONIC 20 SPECTROPHOTOMETER. TOPICS INCLUDED IN THE MODULE ARE (1) THE STEPWISE USE OF THE SPECTROPHOTOMETER INCLUDING WARM-UP PROCEDURES, ADJUSTMENTS PRIOR TO USE, MAKING MEASUREMENTS, AND CHANGING THE PHOTOTUBE. THIS IS THE SCRIPT FOR THE MODULE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH

IRIS ACCESSION NUMBER: EW008812

PUBLICATION DATE: 82

TITLE: BIBLIOGRAPHY SERIES NINE - WASTEWATER REUSE: A SELECTIVE BIBLIOGRAPHY.

PERSONAL AUTHOR: NIU, SARAH

DESCRIPTOR: *BIBLIOGRAPHIES; ECONOMIC IMPACTS; *INFORMATION SOURCES; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; TECHNOLOGY; *WASTEWATER REUSE; WASTEWATER TREATMENT; *WATER QUALITY; WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 11P.

ABSTRACT: THIS BIBLIOGRAPHY INCLUDES A LISTING OF MATERIALS ON THE CONCEPT OF USING RENOVATED WASTEWATER. THE PUBLICATION IS ARRANGED IN TWO SECTIONS: (1) FEDERAL DOCUMENTS AND (2) CALIFORNIA STATE, CITY, AND COUNTY DOCUMENTS. TOPICS INCLUDE TECHNOLOGY, ECONOMICS, PUBLIC HEALTH, AND WATER QUALITY.

AVAILABILITY: CA POLYTECHNIC STATE UNIVERSITY, ROBERT E. KENNEDY LIBRARY, SAN LUIS OBISPO, CA 93407

IRIS ACCESSION NUMBER: EW008814

PUBLICATION DATE: 78

TITLE: FISH KILLS CAUSED BY POLLUTION - FIFTEEN-YEAR SUMMARY 1961-1975.

DESCRIPTOR: *DATA ANALYSIS; *ENVIRONMENTAL IMPACTS; *FISH; *FISH KILLS; *LITERATURE REVIEWS; *POLLUTANTS; *RESEARCH REPORTS; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 78P.

ABSTRACT: THIS REPORT IS A FIFTEEN-YEAR SUMMARY OF INFORMATION CONTAINED IN FEDERAL FISH KILL PUBLICATIONS, BASED ON VOLUNTARY REPORTING BY STATE AND LOCAL AGENCIES. THE REPORT INCLUDES: AN ANALYSIS OF DATA WHICH DESCRIBES THE NUMBER OF INCIDENTS, THE TOTAL NUMBER OF FISH KILLED, THE AVERAGE SIZE OF A KILL, AND THE LARGEST FISH KILL OR KILLS REPORTED. THE REPORT ALSO INCLUDES THE NUMBER OF REPORTED INCIDENTS BY EACH POLLUTION SOURCE OPERATION AND BY THE INDIVIDUAL SOURCES OF POLLUTION UNDER THESE MAJOR OPERATIONS.

AVAILABILITY: ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER PLANNING AND STANDARDS (WH-551) WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW008817

PUBLICATION DATE: FEB 83

TITLE: AIR VOIDS AT DOWNSHAFT-TUNNEL BENDS.

PERSONAL AUTHOR: GOLDRING, BARRY T.

DESCRIPTOR: *AIR VOIDS; *PIPE BENDS; *PIPES; *PREDICTION; *RESEARCH; *WATER FLOW; *WATER FLOW RATES

DESCRIPTIVE NOTE: 189-198P.

ABSTRACT: IN CLOSED CONDUIT WATER FLOWS CONTAINING A SMALL AMOUNT OF FREE AIR, AN AIR VOID CAN FORM AT A BEND WHICH CONNECTS A VERTICAL SHAFT TO A HORIZONTAL TUNNEL. A SUDDEN REDUCTION IN THE WATER FLOW RATE CAN CAUSE THIS VOID TO VENT BACK UP THE SHAFT. A COMBINED THEORETICAL AND ANALYTICAL APPROACH YIELDED EQUATIONS WHICH CAN BE USED TO PREDICT VOID FORMATION AND VENTING A DOWNSHAFT-TUNNEL BEND.

AVAILABILITY: JOURNAL OF THE HYDRAULIC ENGINEERING; V109 N2

IRIS ACCESSION NUMBER: EW008818

PUBLICATION DATE: FEB 83

TITLE: PLUME DILUTION FOR DIFFUSERS WITH MULTIPORT RISERS.

PERSONAL AUTHOR: ISAACSON, MORTON S.; AND OTHERS

DESCRIPTOR: *COSTS; *DESIGN; *DILUTION; *MODELS; *MULTIPORT DIFFUSERS; *OCEAN OUTFALLS; *RESEARCH; *STORM WATER RUNOFF; SURFACE RUNOFF; WASTE DISPOSAL; *WASTEWATER DISPOSAL

DESCRIPTIVE NOTE: 199-220P.

ABSTRACT: RESEARCH DATA INDICATED THAT THE MOST COST EFFECTIVE DESIGN FOR RISER EQUIPPED OCEAN WASTEWATER DIFFUSERS MAY INVOLVE THE SMALLEST PORT DIAMETERS PERMITTED BY OTHER DESIGN CONSIDERATIONS, AND CLUSTERING MANY PORTS PER RISER TO DECREASE THE NUMBER OF RISERS NEEDED.

AVAILABILITY: JOURNAL OF THE HYDRAULIC ENGINEERING; V109 N2

IRIS ACCESSION NUMBER: EW008819

PUBLICATION DATE: FEB 83

TITLE: OPTIMAL DIAMETER SELECTION FOR PIPE NETWORKS.

PERSONAL AUTHOR: FEATHERSTONE, RONALD E.; EL-JUMAILY, KARIM K.

DESCRIPTOR: *COSTS; *DESIGN; *DIAMETER SELECTION; *PIPES; *PIPE NETWORKS; *WATER DISTRIBUTION; *WATER PIPES

DESCRIPTIVE NOTE: 221-234P.

ABSTRACT: A NEW APPROACH TO THE LEAST COST DESIGN OF WATER

DISTRIBUTION NETWORKS HAS BEEN DEVELOPED. THE METHOD IS BASED ON TRADITIONAL TECHNIQUES OF PIPE NETWORK ANALYSIS BY COMPUTER. PROVIDED A COMPUTER PROGRAM FOR ANALYZING PIPE NETWORKS IS AVAILABLE, THE OPTIMIZATION TECHNIQUE DEVELOPED REPRESENTS A SIMPLE ADDITION TO THE BASIC PROGRAM.

AVAILABILITY: JOURNAL OF THE HYDRAULIC ENGINEERING; V109 N2

IRIS ACCESSION NUMBER: EW008821

PUBLICATION DATE: FEB 83

TITLE: THREE-DIMENSIONAL SINGLE AND MULTIPLE FREE JETS.

PERSONAL AUTHOR: PANI, BIDYASAGAR; DASH, RAGHUNATH

DESCRIPTOR: *EXPERIMENTS; *HYDRAULIC FLOW; *JETS; *MODELS; *PREDICTION

DESCRIPTIVE NOTE: 254-269P.

ABSTRACT: A THEORETICAL DISTRIBUTION FOR THE STREAMWISE MEAN VELOCITY OF A SINGLE THREE-DIMENSIONAL TURBULENT FREE JET CAN BE DERIVED BY FOLLOWING REICHARDT'S INDUCTIVE THEORY. EXPERIMENTS WERE CONDUCTED ON JETS ISSUING FROM SINGLE AND MULTIPLE HOLES PLACED IN LINE.

AVAILABILITY: JOURNAL OF THE HYDRAULIC ENGINEERING; V109 N2

IRIS ACCESSION NUMBER: EW008822

PUBLICATION DATE: FEB 83

TITLE: RADAR RAIN FORECASTING FOR WASTEWATER CONTROL.

PERSONAL AUTHOR: DAMANT, CHRISTINE; AND OTHERS

DESCRIPTOR: *CANADA; *FORECASTING; *MODELS; *MANAGEMENT; *PREDICTION; *RAIN; *RESEARCH REPORTS; *SURFACE RUNOFF; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 293-297P.

ABSTRACT: A STATISTICAL ANALYSIS OF THE ERRORS IN FORECASTING RAIN AMOUNTS FOR THE ISLAND OF MONTREAL USING WEATHER RADAR DATA WAS UNDERTAKEN. THE PURPOSE OF THE ANALYSIS WAS TO DETERMINE ACCURACY OF FORECASTS TO IMPROVE INFORMATION FOR SURFACE RUNOFF MODELING. IT WAS FOUND THAT MOST OF THE ERRORS WERE DUE TO THE FORECASTING TECHNIQUE.

AVAILABILITY: JOURNAL OF THE HYDRAULIC ENGINEERING; V109 N2

IRIS ACCESSION NUMBER: EW008823

PUBLICATION DATE: FEB 83

TITLE: THERMAL DEPENDENT PHYSICAL PROPERTIES OF WATER.

PERSONAL AUTHOR: HEGGEN, RICHARD J.

DESCRIPTOR: *ENGINEERING APPLICATIONS; *EQUATIONS; *ESTIMATION; *PHYSICAL PROPERTIES; *TEMPERATURE; *WATER

DESCRIPTIVE NOTE: 298-302P.

ABSTRACT: THE PHYSICAL PROPERTIES OF WATER ARE IN NEARLY ALL CASES DEPENDENT ON TEMPERATURE. THIS PAPER PROPOSES A SET OF EMPIRICAL EQUATIONS FOR SIX FUNDAMENTAL PROPERTIES OF WATER. THESE EQUATIONS REPRESENT AN ANALYTIC MIDDLE GROUND, LESS LENGTHY THAN THEIR COUNTERPARTS IN THE PHYSICAL LITERATURE, BUT DESCRIBING THERMAL DEPENDENCE WITH PRECISION EQUALING OR EXCEEDING THE ACCURACY ASSOCIATED WITH MOST ENGINEERING CALCULATIONS.

AVAILABILITY: JOURNAL OF THE HYDRAULIC ENGINEERING; V109 N2

IRIS ACCESSION NUMBER: EW008824

PUBLICATION DATE: FEB 83

TITLE: EFFECTIVE IMPERVIOUS AREA IN URBAN RUNOFF MODELING.

PERSONAL AUTHOR: ALLEY, WILLIAM M.; VEENHUIS, JACK E.

DESCRIPTOR: *DRAINAGE; *IMPERVIOUS AREAS; *MODELS; *PREDICTION; *SURFACE RUNOFF; *URBAN AREAS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 313-319P.

ABSTRACT: IMPERVIOUS AREAS ARE DIVIDED INTO TWO TYPES; THOSE THAT ARE LINKED TO THE FORMAL DRAINAGE SYSTEM (EFFECTIVE IMPERVIOUS AREAS) AND THOSE THAT ARE NOT. DATA COLLECTED FROM 19 URBAN WATERSHEDS IN THE DENVER METROPOLITAN AREA SUGGEST A POTENTIAL EXISTS FOR DEVELOPING RELATIONSHIPS BETWEEN THE EFFECTIVE IMPERVIOUS AREA (EIA) AND THE TOTAL IMPERVIOUS AREA (TIA) FOR URBAN AREAS, EITHER THROUGH A REGRESSION EQUATION BETWEEN THE TWO VARIABLES OR THROUGH ESTIMATES OF THE RATIO EIA/TIA AS A FUNCTION OF LAND USE.

AVAILABILITY: JOURNAL OF THE HYDRAULIC ENGINEERING; V109 N2

IRIS ACCESSION NUMBER: EW008825

PUBLICATION DATE: MAR 83

TITLE: TAKE A HARD LOOK AT SEWER REHAB.

PERSONAL AUTHOR: SCHROCK, B. JAY; DOYLE, ALBERT A.

DESCRIPTOR: *COSTS; *MAINTENANCE; *MANAGEMENT; *PLANNING; *PREVENTIVE MAINTENANCE; *SEWERS; *SEWER REPAIRS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 25-29P.

ABSTRACT: THE COST OF PLANNING FOR SEWER REPAIRS IN AN

ORDERLY WAY CAN BE LESS EXPENSIVE THAN REPLACEMENT AFTER FAILURE. THIS ARTICLE DESCRIBES A NUMBER OF METHODS FOR SEWER REHABILITATION AND SOME CRITERIA FOR DECIDING WHAT METHODS TO USE.

AVAILABILITY: AMERICAN CITY & COUNTY; V98 N3

IRIS ACCESSION NUMBER: EW008826

PUBLICATION DATE: MAR 83

TITLE: WORK STANDARDS - THE FOUNDATION FOR PERFORMANCE AUDITS.

DESCRIPTOR: *AUDITS; *EVALUATION; *MANAGEMENT; *PLANNING; *PERFORMANCE AUDITS; *RECORDS; *REPORTING; *STAFFING; *WORK STANDARDS

DESCRIPTIVE NOTE: 32P.

ABSTRACT: ESTABLISHING WORK STANDARDS IS THE FOUNDATION FOR PERFORMANCE AUDITS. THIS ARTICLE DESCRIBES THE STEPS INVOLVED IN ESTABLISHING WORK STANDARDS AND ILLUSTRATES STANDARDS FOR A WATER DIVISION.

AVAILABILITY: AMERICAN CITY & COUNTY; V98 N3

IRIS ACCESSION NUMBER: EW008827

PUBLICATION DATE: JUL 82

TITLE: SORBENT EVALUATION - INTERIM REPORT.

PERSONAL AUTHOR: WHITTAKER, H.

DESCRIPTOR: *ENVIRONMENTAL IMPACTS; *EVALUATION; LABORATORY TESTS; *POLLUTION CONTROL; PROGRESS REPORT; *SORBENTS; *SORBENT ANALYSIS; *SORBENT EVALUATION; *SPILLS; *SPILL TECHNOLOGY

DESCRIPTIVE NOTE: 86-87P.

ABSTRACT: THIS ARTICLE PRESENTS A BRIEF OVERVIEW OF A SORBENT EVALUATION UNDERTAKEN BY THE ENVIRONMENTAL PROTECTION SERVICE OF CANADA. THIS INTERIM REPORT PRESENTS RESULTS TO DATE, DISCUSSES SORBENT EVALUATIONS CURRENTLY UNDERWAY, AND LISTS 20 SORBENTS CURRENTLY UNDER EVALUATION.

AVAILABILITY: SPILL TECHNOLOGY NEWSLETTER; V7 N4

IRIS ACCESSION NUMBER: EW008828

PUBLICATION DATE: JUL 82

TITLE: SUBSEA CONTAINMENT - A POSSIBLE ALTERNATIVE TO THE "SOMBRERO" APPROACH.

PERSONAL AUTHOR: MEIKLE, K. M.

DESCRIPTOR: *BLOWOUTS; *EQUIPMENT; *OIL SPILLS; *OIL WELLS; *POLLUTION CONTROL; *SUBSEA CONTAINMENT; *TECHNOLOGY

DESCRIPTIVE NOTE: 86-87P.

ABSTRACT: THIS ARTICLE PROVIDES A BRIEF DESCRIPTION OF A CONCEPT TO CONTAIN SUBSEA OIL-WELL BLOWOUTS USING HIGH PRESSURE TECHNOLOGY. THE TECHNIQUE CONSISTS OF INSERTING A LENGTH OF STEEL TUBING INTO THE WELL-BORE THROUGH THE MAIN POINT OF ESCAPE OR OTHER SUITABLE ENTRY USING HYDRAULIC MOLES AND EXPLOITING THEIR ABILITY TO SEEK AND ENTER AN ORIFICE EMITING A FLOW.

AVAILABILITY: SPILL TECHNOLOGY NEWSLETTER; V7 N4

IRIS ACCESSION NUMBER: EW008829

PUBLICATION DATE: JUL 82

TITLE: COUNTERMEASURES TECHNIQUES AND EQUIPMENT.

DESCRIPTOR: *COUNTERMEASURES; *EQUIPMENT; *OIL SPILLS; POLLUTION ABATEMENT; *POLLUTION CONTROL; *SPILL CLEANUP; *STATE-OF-THE-ART REVIEWS; *TECHNOLOGY; WATER POLLUTION

DESCRIPTIVE NOTE: 93-105P.

ABSTRACT: THIS ARTICLE PRESENTS A REVIEW AND DESCRIPTIONS OF COUNTERMEASURE TECHNIQUES AND EQUIPMENT. TOPICS ADDRESSED INCLUDE: OIL SPILL BOOMS, SKIMMERS, SUBSEA CONTAINMENT, SHORELINE PROTECTION AND CLEANUP, OIL AND DEBRIS DISPOSAL ON LAND, BURNERS AND INCINERATORS, THE SAACKE BURNER, AIR PORTABLE PIT INCERATOR, AIR-CURTAIN PIT INCINERATOR, RECIPROCATING KILN, IN-SITU COMBUSION, CHEMICAL DISPERSION, VISUAL MONITORING AND SURVEILLANCE METHODS, TRACKING BUOYS, REMOTE SENSING FROM AIRCRAFT, TRACKING OIL, BLOWOUTS VS. TANKER SPILLS, ICE COVER, SEA STATE, RESPONSE TIME, CHEMICAL DISPERSION, AND OIL SPILL COUNTERMEASURES FOR THE WEST COAST OF CANADA.

AVAILABILITY: SPILL TECHNOLOGY NEWSLETTER; V7 N4

IRIS ACCESSION NUMBER: EW008830

PUBLICATION DATE: MAR 83

TITLE: NEW DIMENSIONS FOR SUPERVISORY TRAINING AND DEVELOPMENT.

PERSONAL AUTHOR: BITTEL, LESTER R.; RAMSEY, JACKSON E.

DESCRIPTOR: *DECISION MAKING; *FUNCTIONS; *MANAGEMENT; *SELECTION; *SUPERVISORS; *SUPERVISOR TRAINING; *TRAINING; *SURVEYS

DESCRIPTIVE NOTE: 12-20P.

ABSTRACT: MANAGEMENT CAN MAKE MEANINGFUL DECISIONS ABOUT SUPERVISORY SELECTION, TRAINING, AND DEVELOPMENT ONLY AFTER CLASSIFYING SUPERVISORS AND COMPARING THEIR ACTIVITIES. THIS

ARTICLE PRESENTS AN ANALYSIS OF CATEGORIES AND FUNCTIONS OF SUPERVISORS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V36 N3

IRIS ACCESSION NUMBER: EW008831

PUBLICATION DATE: MAR 83

TITLE: SUPERVISORY TRAINING: A BLUEPRINT FOR RESEARCH AND TESTING IN PROGRAM DEVELOPMENT.

PERSONAL AUTHOR: NETHERO, SUSAN

DESCRIPTOR: *EVALUATION; *INSTRUCTION; *MANAGEMENT; *PROGRAM DEVELOPMENT; *PROGRAM VALIDATION; *SKILL DEVELOPMENT; *POST SECONDARY EDUCATION; *SURVEYS; *SUPERVISORS; *SUPERVISOR TRAINING; *TRAINING; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 21-25P.

ABSTRACT: A RESEARCH AND TESTING PROCESS AT XEROX LEARNING SYSTEMS IDENTIFIES STEPS FOR DEVELOPING AN EFFECTIVE SKILLS-BASED SUPERVISORY TRAINING PROGRAM. A SIMILAR PROCESS CAN BE APPLIED ON A SMALLER SCALE TO ANY TRAINING PROGRAM. SKILLS THOUGHT TO BE NEEDED ARE IDENTIFIED AND THEN THOSE THAT ARE CRITICAL FOR PERFORMANCE ARE DETERMINED. TRAINING PROGRAMS ARE DESIGNED TO DEVELOP THE SKILLS AND THE PROGRAMS ARE ASSESSED FOR EFFECTIVENESS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V36 N3

IRIS ACCESSION NUMBER: EW008832

PUBLICATION DATE: MAR 83

TITLE: SUPERVISORY DEVELOPMENT: THE NEED FOR AN INTEGRATED STRATEGY.

PERSONAL AUTHOR: WOLFE, EDWARD H.

DESCRIPTOR: *MANAGEMENT; *PRODUCTIVITY; *PERSONNEL; *STAFF DEVELOPMENT; *STAFF SELECTION; *SUPERVISION; *SUPERVISORS; *TRAINING

DESCRIPTIVE NOTE: 28-31P.

ABSTRACT: ANY STRATEGY FOR SUPERVISORY DEVELOPMENT MUST BE COMPATIBLE AND CONSISTENT WITH THE CONCEPTS, TECHNIQUES, SKILLS, AND STYLES USED BY HIGHER LEVELS OF MANAGEMENT. SUPERVISORY DEVELOPMENT IS A MANAGEMENT PROBLEM. A NUMBER OF IDEAS NEEDED TO DEVELOP EFFECTIVE SUPERVISORS ARE PRESENTED.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V36 N3

IRIS ACCESSION NUMBER: EW008833

PUBLICATION DATE: MAR 83

TITLE: INNOVATIVE MIDDLE MANAGERS: THE KEY TO PRODUCTIVITY.

PERSONAL AUTHOR: BLESSING, BUCK

DESCRIPTOR: *GOAL SETTING; *INCENTIVES; *MANAGERS; *MANAGEMENT; *STAFF DEVELOPMENT; *PRODUCTIVITY; *SATISFACTION; *SUPERVISION; *SUPERVISORS

DESCRIPTIVE NOTE: 38-42P.

ABSTRACT: MIDDLE MANAGERS HAVE THE TIME, THE EDUCATION, AND (IF PROVIDED WITH SUPPORT) THE WILL TO SUGGEST AND INITIATE DRAMATIC PRODUCTIVITY IMPROVEMENTS FOR THEMSELVES AND OTHERS.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V36 N3

IRIS ACCESSION NUMBER: EW008834

PUBLICATION DATE: MAR 83

TITLE: SMARTPROCESS: A PRACTICAL TRAINING PROGRAM AND A TOOL FOR ORGANIZATIONAL CHANGE.

PERSONAL AUTHOR: ZIERDEN, WILLIAM E.; ROBINSON, KATHLEEN M.

DESCRIPTOR: EVALUATION; GUIDED DISCOVERY; *INSTRUCTION; *ORGANIZATIONAL CHANGE; POST SECONDARY EDUCATION; *SMARTPROCESS; *STAFF DEVELOPMENT; *SUPERVISORS; *TRAINING; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 62-67P.

ABSTRACT: SELF-LEARNING, MOTIVATION, AWARENESS, RESPONSIBILITY, AND TECHNICAL COMPETENCE CONVEY THE CONCEPTS UNDERLYING THIS TRAINING AND DEVELOPMENT PROGRAM.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V36 N3

IRIS ACCESSION NUMBER: EW008835

PUBLICATION DATE: MAR 83

TITLE: POLICY, PROCEDURE AND PRACTICE IN TECHNICAL TRAINING.

PERSONAL AUTHOR: MURPHY, BRIAN P.

DESCRIPTOR: GOALS; MISSION STATEMENTS; OBJECTIVES; *POLICIES; PRACTICES; *PROCEDURES; PERFORMANCE STANDARDS; *TECHNICAL TRAINING; *TRAINING

DESCRIPTIVE NOTE: 81-84P.

ABSTRACT: DOCUMENTATION OF THESE THREE CONCEPTS IS A

DETERMINANT FOR EFFICIENCY AND EFFECTIVENESS IN TRAINING AND IS CENTRAL TO THE SUCCESS OF THE TRAINER.

AVAILABILITY: TRAINING 8 DEVELOPMENT JOURNAL; V36 N3

IRIS ACCESSION NUMBER: EW008836

PUBLICATION DATE: MAR 83

TITLE: CONVENTIONAL WATER TREATMENT PROCESS OPERATES IN UNCONVENTIONAL MANNER.

PERSONAL AUTHOR: BACHMAN, JOSEPH S.; MORGAN, JOHN R.

DESCRIPTOR: *COSTS; *DRINKING WATER; *ION-EXCHANGE; *OHIO; *OPERATIONS (WATER); *PROCESS EVALUATION; *WATER TREATMENT

DESCRIPTIVE NOTE: 50-53P.

ABSTRACT: DESCRIBED IS A WATER TREATMENT PROCESS IN NEW PHILADELPHIA, OHIO. BRINE WASTES ARE DISCHARED TO A RIVER PERMITTING USE OF AN ION-EXCHANGE SOFTENING SYSTEM.

AVAILABILITY: PUBLIC WORKS; V114 N3

IRIS ACCESSION NUMBER: EW008837

PUBLICATION DATE: MAR 83

TITLE: SOLVING A DIFFICULT SEWER REHABILITATION PROBLEM.

PERSONAL AUTHOR: UTZ, JOHN H.

DESCRIPTOR: *MAINTENANCE; *SEWERS; *SEWER REPAIRS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 59-60P.

ABSTRACT: DESCRIBED IS THE USE OF AN IN-PLACE LINING TECHNIQUE FOR REHABILITATION OF A DETERIORATED SEWER. THE TECHNIQUE SAVED A NUMBER OF VALUABLE TREES.

AVAILABILITY: PUBLIC WORKS; V114 N3

IRIS ACCESSION NUMBER: EW008838

PUBLICATION DATE: MAR 83

TITLE: CLEANING AND LINING OLD WATER MAINS SAVES MILLIONS FOR MASSACHUSETTS COMMUNITY.

PERSONAL AUTHOR: CUTONE, ROBERT

DESCRIPTOR: *COSTS; *MAINTENANCE; *MASSACHUSETTS; *PIPES; *WATER PIPES; *PIPE REPAIRS; *WATER DISTRIBUTION; *WATER MAINS; *WATER SUPPLIES

DESCRIPTIVE NOTE: 70-71,96P.

ABSTRACT: REHABILITATION OF WATER MAINS IN NEW BEDFORD, MASSACHUSETTS, PROVED TO BE A COST-EFFECTIVE DISTRIBUTION SYSTEM IMPROVEMENT.

AVAILABILITY: PUBLIC WORKS; V114 N3

IRIS ACCESSION NUMBER: EW008839

PUBLICATION DATE: MAR 83

TITLE: TREATMENT PLANT HAS PARK-LIKE SETTING.

PERSONAL AUTHOR: SHEPARD, PAUL M.

DESCRIPTOR: *DESIGN; *ENVIRONMENTAL CONCERNS; *FACILITIES; *OHIO; *PLANNING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 75-77P.

ABSTRACT: SPECIAL ARCHITECTURAL AND LANDSCAPING TECHNIQUES WERE USED TO OVERCOME OPPOSITION TO A WASTEWATER PLANT. DESCRIBED IS A PLANT IN DELAWARE COUNTY, OHIO.

AVAILABILITY: PUBLIC WORKS; V114 N3

IRIS ACCESSION NUMBER: EW008840

PUBLICATION DATE: MAR 83

TITLE: INNOVATIVE TECHNIQUE SEALS MANHOLE LEAKS.

PERSONAL AUTHOR: ST. PIERRE, EDWARD A.

DESCRIPTOR: *LEAKS; *MAINTENANCE; *MANHOLES; *POLYURETHANE; *REPAIRS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 76-77P.

ABSTRACT: POLYURETHANE FOAM WAS USED TO SEAL LEAKS THAT DEFIED CONVENTIONAL REPAIR METHODS. POLYURETHANE EXPANDS TO FILL SPACES THAT FREQUENTLY ARE NOT FILLED BY OTHER PROCEDURES.

AVAILABILITY: PUBLIC WORKS; V114 N3

IRIS ACCESSION NUMBER: EW008841

PUBLICATION DATE: MAR 83

TITLE: DESALTING WATER IN FLORIDA.

PERSONAL AUTHOR: DYKES, GLENN M.

DESCRIPTOR: *DRINKING WATER; *DESALINATION; *FLORIDA; *GROUNDWATER; *POTABLE WATER; *OPERATIONS (WATER); *REVERSE OSMOSIS; *WATER RESOURCES; *WATER QUALITY; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 104-107P.

ABSTRACT: DURING THE PAST 10 YEARS, WATER SUPPLIERS IN FLORIDA HAVE INSTALLED SOME 85 DESALTING TREATMENT PLANTS, MOST OF WHICH USE REVERSE OSMOSIS. BRACKISH GROUNDWATER IS USUALLY TREATED. THESE TECHNIQUES ARE ALSO BEING CONSIDERED FOR WASTE TREATMENT AND REMOVAL OF ORGANICS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N3

IRIS ACCESSION NUMBER: EW008842

PUBLICATION DATE: MAR 83

TITLE: DESALTING--A WATER SUPPLY ALTERNATIVE FOR VIRGINIA BEACH.

PERSONAL AUTHOR: ROBINSON, MILLARD P., JR.; AND OTHERS

DESCRIPTOR: *DRINKING WATER; *DESALINATION; *OPERATIONS (WATER); *RECLAIMED WATER; *REVERSE OSMOSIS; *VIRGINIA; *WATER RESOURCES; *WATER SUPPLY; *WATER TREATMENT; *WATER NEEDS

DESCRIPTIVE NOTE: 109-117P.

ABSTRACT: VIRGINIA BEACH, VIRGINIA HAS BEEN REVIEWING ITS WATER NEEDS FOR THE YEAR 2000. DESALTING BRACKISH GROUNDWATER TO MEET INTERIM NEEDS HAS BEEN DETERMINED TO BE A REASONABLE APPROACH AT THIS TIME.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N3

IRIS ACCESSION NUMBER: EW008843

PUBLICATION DATE: MAR 83

TITLE: REUSING COOLING WATER IN AN ELECTRIC POWER PLANT.

PERSONAL AUTHOR: GROBMYER, WILLIAM P.; AND OTHERS

DESCRIPTOR: *COOLING WATER; *ELECTRIC POWER PLANTS; *FLORIDA; *EFFLUENTS; *RESEARCH REPORTS; *RECYCLING; *WATER REUSE; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 118-123P.

ABSTRACT: ON-SITE STUDIES WERE CONDUCTED TO DETERMINE AN EFFECTIVE TREATMENT PROCESS FOR COOLING WATER IN A FLORIDA POWER PLANT. FRONT-END TREATMENT WAS DETERMINED TO BE THE MOST EFFECTIVE METHOD. COOLING WATER TREATED WITH THE NEW PROCESS CAN BE RECYCLED 50 TIMES; WATER PREVIOUSLY COULD BE RECYCLED FIVE TIMES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N3

IRIS ACCESSION NUMBER: EW008844

PUBLICATION DATE: MAR 83

TITLE: DESIGNING AND CONSTRUCTING THE TRAP FALLS WATER TREATMENT PLANT.

PERSONAL AUTHOR: JOHNSON, MARK L.; DOE, PETER W.

DESCRIPTOR: *COSTS; *DESIGN; *CONSTRUCTION; *COMPLIANCE; *FACILITIES; *OPERATIONS (WATER); *TRAINING; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 124-131P.

ABSTRACT: THE DESIGN OBJECTIVE WAS TO CREATE A FUNCTIONAL AND ECONOMICAL SURFACE WATER TREATMENT PLANT WITHIN THE TIME ALLOTTED TO MEET NEW WATER QUALITY STANDARDS. THE FACILITY WAS FINISHED ON TIME AT A FINAL COST WELL BELOW ESTIMATES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N3

IRIS ACCESSION NUMBER: EW008845

PUBLICATION DATE: MAR 83

TITLE: FORMATION OF ORGANIC CHLORINE IN PUBLIC WATER SUPPLIES.

PERSONAL AUTHOR: FLEISCHACKER, STEPHEN J.; RANDTKE, STEPHEN J.

DESCRIPTOR: *CHLORINE; *ORGANIC CHLORINE; *PH; *TEMPERATURE; *RESEARCH REPORTS; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 132-138P.

ABSTRACT: EXAMINED ARE THE INFLUENCES OF PRECURSOR SOURCE AND CONCENTRATION, CHLORINE FORM AND DOSAGE, PH, MIXING AND TEMPERATURE ON THE FORMATION OF ORGANIC CHLORINE. THEY FOUND THAT THE AMOUNT OF ORGANIC CHLORINE FORMED INCREASED WITH INCREASING CHLORINE DOSAGE, INCREASING TOC CONCENTRATION, INCREASING TEMPERATURE, AND DECREASING PH.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N3

IRIS ACCESSION NUMBER: EW008846

PUBLICATION DATE: MAR 83

TITLE: THE ECOLOGY OF ACID-FAST ORGANISMS IN WATER SUPPLY, TREATMENT, AND DISTRIBUTION SYSTEMS.

PERSONAL AUTHOR: HASS, CHARLES N.; AND OTHERS

DESCRIPTOR: *ACID-FAST BACTERIA; *BACTERIA; *CHLORINATION; *FILTRATION; *INDICATOR ORGANISMS; *MICROBIOLOGY;

*MONITORING; *SAMPLING; *WATER TREATMENT

DESCRIPTIVE NOTE: 139-144P.

ABSTRACT: ACID-FAST ORGANISMS HAVE BEEN SUGGESTED AS POSSIBLE ALTERNATIVES TO COLIFORMS AS INDICATOR ORGANISMS IN BACTERIOLOGIC MONITORING OF WATER TREATMENT AND DISINFECTION. DATA ARE PROVIDED ON THE PRESENCE AND REMOVAL OF ACID-FAST ORGANISMS IN TWO WATER SYSTEMS. DATA INDICATED THAT ACID-FAST ORGANISMS CAN BE REMOVED BY SAND FILTRATION, BUT ARE RESISTANT TO CONVENTIONAL TERMINAL CHLORINATION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N3

IRIS ACCESSION NUMBER: EW008847

PUBLICATION DATE: MAR 83

TITLE: DESORPTION OF COMPOUNDS DURING OPERATION OF GAC ADSORPTION SYSTEM.

PERSONAL AUTHOR: THACKER, WILLIAM E; AND OTHERS

DESCRIPTOR: *ADSORPTION; *GAC; *GRANULAR ACTIVATED CARBON; *DESORPTION; *ORGANIC CONTAMINANTS; *RESEARCH REPORTS; *WATER TREATMENT

DESCRIPTIVE NOTE: 144-149P.

ABSTRACT: ORGANIC CONTAMINANTS CAN BE DESORBED FROM GAC. MODEL SIMULATIONS INDICATED A REDUCTION IN INFLUENT CONCENTRATION OR COMPETITION BETWEEN SUBSTANCES CAN PRODUCE AN EFFLUENT CONCENTRATION GREATER THAN THE INFLUENT CONCENTRATION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N3

IRIS ACCESSION NUMBER: EW008849

PUBLICATION DATE: MAR 83

TITLE: DETERMINING RESIDUAL CHLORINE: EFFECT OF TEMPERATURE ON THE TITRAMETRIC STARCH-IODINE END POINT.

PERSONAL AUTHOR: HATCH, GARY L.; YANG, VUE

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHLORINE; *LABORATORY PROCEDURES; *RESEARCH REPORTS; *RESIDUAL CHLORINE; *STARCH-IODINE; *TITRATION; *TEMPERATURE

DESCRIPTIVE NOTE: 154-156P.

ABSTRACT: DATA ARE PROVIDED IN THIS ARTICLE TO DEMONSTRATE THE EFFECT OF TEMPERATURE ON THE ACCURACY OF THE STARCH-IODINE END POINT. RESULTS SHOWED THAT TEMPERATURES ABOVE 20 DEGREES C. CAN PRODUCE SIGNIFICANT ERROR.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N3

IRIS ACCESSION NUMBER: EW008850

PUBLICATION DATE: MAR 83

TITLE: JAPANESE STRATEGY WORKS FOR JACKSONVILLE.

PERSONAL AUTHOR: HERSCH, PAUL

DESCRIPTOR: *COSTS; *EFFICIENCY; *FLORIDA; *MANAGEMENT; *MANAGEMENT STYLE; *OPERATIONS (WATER); *PERSONNEL RELATIONS; *WATER TREATMENT

DESCRIPTIVE NOTE: 12,45P.

ABSTRACT: DESCRIBED IS THE MANAGEMENT STRATEGY USED AT THE JACKSONVILLE, FLORIDA, WATER SERVICES DIVISION. THE MANAGEMENT STYLE IS FOCUSED ON EMPLOYER/EMPLOYEE RELATIONS AND HAS RAISED EFFICIENCY, LOWERED OVERHEAD, AND GENERATED IMPROVED OPERATIONS.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N3

IRIS ACCESSION NUMBER: EW008851

PUBLICATION DATE: MAR 83

TITLE: MICROCOMPUTER AIDS SEWER SYSTEM MASTER PLANNING.

PERSONAL AUTHOR: ALDRICH, JOHN

DESCRIPTOR: *COMPUTER APPLICATIONS; *COMPUTER SOFTWARE; *FLORIDA; *MICROCOMPUTERS; *PLANNING; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 19P.

ABSTRACT: DESCRIBED ARE SOME USES OF MICROCOMPUTERS AND COMPUTER SOFTWARE FOR SEWER SYSTEM EVALUATION IN ST.PETERSBURG, FLORIDA.

AVAILABILITY: WATER ENGINEERING 8 MANAGEMENT; V130 N3

IRIS ACCESSION NUMBER: EW008852

PUBLICATION DATE: MAR 83

TITLE: BURIED TREASURES OF THE HIGH PLAINS.

PERSONAL AUTHOR: WILLIAMS, JEAN O.

DESCRIPTOR: *AGRICULTURE; *WATER CONSERVATION; *IRRIGATION; *NATURAL RESOURCES; *OGALLALA AQUIFER; *WATER; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 26-27P.

ABSTRACT: THE OGALLALA AQUIFER'S VAST SUPPLY OF WATER WILL CONTINUE TO DIMINISH, BUT MODIFIED AGRICULTURE PRACTICES WILL ACCOMODATE THE CHANGES. DISCUSSED ARE POTENTIAL WATER RESOURCES AND PRACTICES THAT DO EFFECT AND MAY EFFECT FUTURE USE.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N3

IRIS ACCESSION NUMBER: EW008853

PUBLICATION DATE: MAR 83

TITLE: REVENUES DOUBLE AFTER OLD WATER METERS REPLACED.

PERSONAL AUTHOR: READER, JAMES D.

DESCRIPTOR: *METERS; *REVENUES; *TEXAS; *WATER METERS; *WATER SUPPLY; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 28-29P.

ABSTRACT: A METER CHANGE-OUT PROGRAM BASED UPON A COMPUTER-AIDED FINANCIAL ANALYSIS HAS QUICKLY DEMONSTRATED DRAMATIC BILLING IMPROVEMENTS IN SMITHVILLE, TEXAS.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N3

IRIS ACCESSION NUMBER: EW008854

PUBLICATION DATE: MAR 83

TITLE: WATER MANAGEMENT INITIATIVES IN THE COMMONWEALTH.

PERSONAL AUTHOR: LOVEJOY, G. MONTGOMERY, III

DESCRIPTOR: *WATER CONSERVATION; *INCENTIVES; *MANAGEMENT; *MASSACHUSETTS; *NATURAL RESOURCES; *WATER USE; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 30-32P.

ABSTRACT: THEORETICALLY, MASSACHUSETTS SHOULD NOT HAVE ANY WATER SHORTAGES, BUT IT DOES IN SOME AREAS. DESCRIBED ARE WAYS THE STATE IS HANDLING THE PROBLEM, AND HOW SOME LARGE INDUSTRIAL WATER CONSUMERS ARE RESPONDING TO PRICING SIGNALS.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N3

IRIS ACCESSION NUMBER: EW008855

PUBLICATION DATE: MAR 83

TITLE: TOXICOLOGICAL FUNDAMENTALS.

PERSONAL AUTHOR: BOARDMAN, GREGORY D.; SHERRARD, JOSEPH H.

DESCRIPTOR: *DRINKING WATER; *EFFLUENTS; *TOXICOLOGY; *TOXIC SUBSTANCES; *WATER TREATMENT; *WASTEWATER TREATMENT; *WATER SUPPLY

DESCRIPTIVE NOTE: 34-36P.

ABSTRACT: WHETHER THEY INHABIT DRINKING WATER SUPPLIES OR TREATED WASTEWATER EFFLUENTS, TOXIC MATERIALS DEMAND CONSTANT VIGILANCE. THE ARTICLE INCLUDES SOME BASIC FACTS ON THIS TOPIC.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N3

IRIS ACCESSION NUMBER: EW008856

PUBLICATION DATE: MAR 83

TITLE: HOW TO "MAKE NEWS" SUCCESSFULLY.

PERSONAL AUTHOR: BERGER, THOMAS J.; FORCE, JAMES M.

DESCRIPTOR: *MASS MEDIA; *PRESS CONFERENCES; *PRESS PROGRAMS; *PUBLIC RELATIONS; *RECOMMENDATIONS

DESCRIPTIVE NOTE: 38-40P.

ABSTRACT: PRESENTED IN THIS ARTICLE ARE THE BASICS OF THE PRESS RELATIONS BUSINESS. THE MATERIAL IS PRESENTED WITH THE WASTEWATER PLANT SPOKESMEN IN MIND.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT; V130 N3

IRIS ACCESSION NUMBER: EW008857

PUBLICATION DATE: AUG 80

TITLE: LAB PROCEDURES. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUDIE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: CARNEGIE, JOHN W.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *POST SECONDARY EDUCATION; *SLUDGE; *TRAINING METHODS; TEACHING GUIDES; *WASTEWATER TREATMENT; *ANALYTICAL TECHNIQUES

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE-17 PAGES; STUDENT WORKBOOK-18 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: LABORATORY TESTS USED TO DETERMINE STATUS AND TO EVALUATE AND/OR MAINTAIN PROCESS CONTROL OF THE VARIOUS SLUDGE TREATMENT PROCESSES ARE INTRODUCED IN THIS LESSON. NEITHER DETAILED TEST PROCEDURES NOR EXPLANATIONS OF HOW THE TESTS SHOULD BE APPLIED TO EVERY UNIT ARE EXPLAINED; THIS INFORMATION IS PROVIDED IN OTHER MODULES. THE INSTRUCTOR'S MANUAL CONTAINS A BRIEF DESCRIPTION OF THE LESSON, ESTIMATED PRESENTATION TIME, INSTRUCTIONAL MATERIALS LIST, SUGGESTED SEQUENCE OF PRESENTATION, REQUIRED READING LIST, REFERENCE READING LIST, LECTURE OUTLINE, NARRATIVE OF THE SLIDE/TAPE

PROGRAM USED WITH THE LESSON, AND STUDENT WORKSHEET (WITH ANSWERS). THE STUDENT WORKBOOK CONTAINS OBJECTIVES, GLOSSARY, DESCRIPTIONS OF THE LABORATORY TESTS FOR SLUDGE TREATMENT AND DISPOSAL, WORKSHEET, AND LIST OF TREATMENT PROCESSES CORRELATED WITH APPLICABLE LABORATORY TESTS AND PURPOSE OF THE TESTS.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE, 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008858

PUBLICATION DATE: AUG 80

TITLE: SLUDGE LAGOONS. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: SHARMAN, RONALD M.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *SLUDGE; SAFETY; *TRAINING METHODS; *TEACHING GUIDES; *WASTEWATER TREATMENT; *OPERATIONS (WASTEWATER); *LAGOONS; *WASTE DISPOSAL

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE-17 PAGES; STUDENT WORKBOOK-25 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON DESCRIBES THREE DIFFERENT TYPES OF SLUDGE LAGOONS: (1) DRYING LAGOONS; (2) FACULTATIVE LAGOONS; AND (3) ANAEROBIC LAGOONS. NORMAL OPERATING SEQUENCE AND EQUIPMENT ARE ALSO DESCRIBED. THE LESSON IS DESIGNED TO BE USED IN SEQUENCE WITH THE COMPLETE SLUDGE TREATMENT AND DISPOSAL COURSE #166 OR AS AN INDEPENDENT LESSON. THE INSTRUCTOR'S MANUAL CONTAINS A DESCRIPTION OF THE LESSON, ESTIMATED PRESENTATION TIME, INSTRUCTIONAL MATERIALS LIST, SUGGESTED SEQUENCE OF PRESENTATION, READING LISTS, OBJECTIVES, LECTURE OUTLINE, NARRATIVE OF THE SLIDE/TAPE PROGRAM USED WITH THE LESSON, AND STUDENT WORKSHEET (WITH ANSWERS). THE STUDENT WORKBOOK CONTAINS PLANT FLOW DIAGRAMS, OBJECTIVES, GLOSSARY, TEXT MATERIAL, REFERENCES, AND WORKSHEET. TABLES LISTING ADVANTAGES/DISADVANTAGES OF USING SLUDGE DRYING LAGOONS AND ADVANTAGES/LIMITATIONS OF USING FACULTATIVE SLUDGE LAGOONS FOR LONG-TERM STORAGE ARE INCLUDED. SAFETY MEASURES ARE BRIEFLY CONSIDERED.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE, 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008859

PUBLICATION DATE: AUG 80

TITLE: FILTER PRESSES. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: ALLOWAY, RAWLE A.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; POST SECONDARY EDUCATION; *SLUDGE; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *OPERATIONS (WASTEWATER); FILTER PRESSES; *TEACHING GUIDES

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE-20 PAGES; STUDENT WORKBOOK-24 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON IS AN INTRODUCTION TO THE OPERATION OF FILTER PRESSES. TWO BASIC TYPES OF PRESSES, THEIR COMPONENTS, THE SEQUENCE OF OPERATION, OPERATIONAL CONTROLS, SAMPLING, AND TESTING ARE DISCUSSED. THE INSTRUCTOR'S MANUAL CONTAINS A DESCRIPTION OF THE LESSON, ESTIMATED PRESENTATION TIME, INSTRUCTIONAL MATERIALS LIST, SUGGESTED SEQUENCE OF PRESENTATION, READING LISTS, OBJECTIVES, LECTURE OUTLINE, NARRATIVE OF THE SLIDE/TAPE PROGRAM USED WITH THE LESSON, AND STUDENT WORKSHEET (WITH ANSWERS). THE STUDENT WORKBOOK CONTAINS PLANT FLOW DIAGRAMS, OBJECTIVES, GLOSSARY, TEXT MATERIAL, REFERENCES, AND WORKSHEET. TEXT MATERIAL IS PRESENTED IN FIVE SECTIONS TITLED: FILTER PRESS BASICS, EQUIPMENT, OPERATIONAL CONTROLS, AND SAMPLING AND TESTING.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE, 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008860

PUBLICATION DATE: AUG 80

TITLE: BELT FILTRATION. SLUDGE TREATMENT AND DISPOSAL COURSE #166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: BROSTE, DALE

DESCRIPTOR: *OPERATIONS (WASTEWATER); *BELT FILTRATION; *WASTEWATER TREATMENT; INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; POST SECONDARY EDUCATION; *SLUDGE; *TEACHING GUIDES

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE-23 PAGES; STUDENT WORKBOOK-21 PAGES; ALSO AVAILABLE FROM EPA/INFORMATION REFERENCE CENTER, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON, AN INTRODUCTION TO BELT MANAGEMENT, WAS DEVELOPED FOR A COURSE IN SLUDGE TREATMENT AND DISPOSAL. FUNDAMENTAL PRINCIPLES OF BELT FILTER OPERATION ARE DESCRIBED. CHEMICAL CONDITIONING AND THE EFFECT ON SLUDGE CHARACTERISTICS ARE DISCUSSED AND A DETAILED DESCRIPTION OF THE DIFFERENT ZONES OF DEWATERING IS PRESENTED. INFORMATION ON TYPICAL COMPONENTS AND THEIR FUNCTION IS FOLLOWED BY A DISCUSSION OF PROCESS CONTROL PARAMETERS AND SAFETY CONSIDERATIONS. THE INSTRUCTOR'S MANUAL CONTAINS A BRIEF DESCRIPTION OF THE LESSON, LIST OF LESSONS STUDENTS SHOULD REVIEW BEFORE STARTING BELT FILTRATION, ESTIMATED TIME, INSTRUCTIONAL MATERIALS LIST, SUGGESTED SEQUENCE OF

PRESENTATION, REQUIRED READING LIST, REFERENCE READING LIST, LECTURE OUTLINE, NARRATIVE OF THE SLIDE/TAPE PROGRAM USED WITH THE LESSON, AND STUDENT WORKSHEET (WITH ANSWERS). THE STUDENT WORKBOOK CONTAINS OBJECTIVES, PLANT FLOW DIAGRAMS, GLOSSARY, SUBJECT MATTER, REFERENCES, AND WORKSHEET. THE SUBJECT MATTER IS PRESENTED UNDER THE FOLLOWING HEADINGS: THEORY, COMPONENTS, PROCESS STREAM CHARACTERISTICS, SAFETY, AND OPERATIONAL PARAMETERS.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET; SLIDE-TAPE, 1 COPY OF STUDENT WORKBOOK AND 1 COPY OF INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008861

PUBLICATION DATE: AUG 80

TITLE: HEAT TREATMENT. SLUDGE TREATMENT AND DISPOSAL COURSE #166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: FILER, HERB; BROSTE, DALE

DESCRIPTOR: *OPERATIONS (WASTEWATER); HEAT TREATMENT (SLUDGE); *WASTEWATER TREATMENT; *TEACHING GUIDES; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *POST SECONDARY EDUCATION; *SLUDGE

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE-19 PAGES; STUDENT WORKBOOK-18 PAGES; ALSO AVAILABLE FROM EPA/INFORMATION REFERENCE CENTER, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON WAS DEVELOPED FOR A COURSE IN SLUDGE TREATMENT AND DISPOSAL. THE LESSON DESCRIBES THE PORTEOUS HEAT TREATMENT METHOD OF SLUDGE CONDITIONING AND COMPARES THAT SYSTEM TO THE ZIMPRO WET AIR OXIDATION PROCESS. THE THEORY OF HEAT TREATMENT, SYSTEM OF COMPONENTS AND FUNCTIONS, AND CONCEPTS OF OPERATION ARE ADDRESSED IN THE LESSON. THE INSTRUCTOR'S MANUAL CONTAINS A BRIEF DESCRIPTION OF THE LESSON, ESTIMATED TIME, INSTRUCTIONAL MATERIALS LIST, SUGGESTED SEQUENCE OF PRESENTATION, REQUIRED READING LIST, REFERENCE READING LIST, OBJECTIVES, LECTURE OUTLINE, NARRATIVE OF THE SLIDE/TAPE PROGRAM USED WITH THE LESSON, AND STUDENT WORKSHEET (WITH ANSWERS). THE STUDENT WORKBOOK CONTAINS OBJECTIVES, PLANT FLOW DIAGRAMS, GLOSSARY, DISCUSSION OF HEAT TREATMENT, REFERENCES AND WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET (SLIDE-TAPE, 1 COPY OF STUDENT WORKBOOK AND 1 COPY OF INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008862

PUBLICATION DATE: AUG 80

TITLE: COMPOSTING. SLUDGE TREATMENT AND DISPOSAL COURSE #166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: ARASMITH, E. E.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *POST SECONDARY EDUCATION; *SLUDGE; *TEACHING GUIDES; *OPERATIONS (WASTEWATER); *COMPOSTING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE-19 PAGES; STUDENT WORKBOOK-19 PAGES; ALSO AVAILABLE FROM EPA/INFORMATION REFERENCE CENTER, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: COMPOSTING IS A LESSON DEVELOPED FOR A SLUDGE TREATMENT AND DISPOSAL COURSE. THE LESSON DISCUSSES THE BASIC THEORY OF COMPOSTING AND THE BASIC OPERATION, IN A STEP-BY-STEP SEQUENCE, OF THE TWO TYPICAL COMPOSTING PROCEDURES: WINDROW AND FORCED AIR STATIC PILE. THE LESSON THEN COVERS BASIC MONITORING AND OPERATIONAL PROCEDURES. THE INSTRUCTOR'S MANUAL CONTAINS A BRIEF DESCRIPTION OF THE LESSON, ESTIMATED TIME, INSTRUCTIONAL MATERIALS LIST, SUGGESTED SEQUENCE OF PRESENTATION, REQUIRED READING LIST, REFERENCE READING LIST, OBJECTIVES, LECTURE OUTLINE, NARRATIVE OF THE SLIDE/TAPE PROGRAM USED WITH THE LESSON, AND STUDENT WORKSHEET (WITH ANSWERS). THE STUDENT WORKBOOK CONTAINS OBJECTIVES, PLANT FLOW DIAGRAMS, GLOSSARY, SUBJECT MATTER, LIST OF REFERENCES, AND WORKSHEET. SUBJECT MATTER IS GROUPED UNDER THE FOLLOWING HEADINGS: BACKGROUND, BASIC THEORY, WINDROW, FORCED AIR SYSTEM, AND OPERATIONS.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET (SLIDE-TAPE, 1 COPY OF STUDENT WORKBOOK AND 1 COPY OF INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008863

PUBLICATION DATE: 79

TITLE: TRAINING COURSE ON ACTIVATED SLUDGE PROCESS CONTROL - INSTRUCTOR'S MANUAL.

DESCRIPTOR: *ACTIVATED SLUDGE; *ACTIVATED SLUDGE PROCESS CONTROL; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS CONTROLS; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 196P. PRICE: $1.00 PER DOCUMENT PLUS $0.03 PER PAGE.

ABSTRACT: THIS IS THE INSTRUCTORS MANUAL FOR A TRAINING COURSE IN ACTIVATED SLUDGE PROCESS CONTROL. THE COURSE CONSISTS OF 28 MODULAR LESSONS AND CAN BE TAILORED BY THE INSTRUCTOR TO MEET THE NEEDS OF A SPECIFIC GROUP. THE COURSE IS DESIGNED FOR 40 HOURS OF INSTRUCTION. THE INSTRUCTOR'S MANUAL INCLUDES OBJECTIVES, LESSON PLANS, A LIST OF RESOURCES, AND SOLUTIONS TO PROBLEMS. A RELATED DOCUMENT IS THE TRAINEE'S MANUAL (EW 008 864). IN ADDITION A VISUAL AIDS PACKAGE OF 195 35MM SLIDES IS AVAILABLE FOR PURCHASE OR RENT (EW 008 865).

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW008864

PUBLICATION DATE: 79

TITLE: TRAINING COURSE ON ACTIVATED SLUDGE PROCESS CONTROL - TRAINEE'S MANUAL.

DESCRIPTOR: *ACTIVATED SLUDGE; *ACTIVATED SLUDGE PROCESS CONTROL; *INSTRUCTION; INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS CONTROLS; *SLUDGE; *TEACHING GUIDES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 462P. PRICE: $1.00 PER DOCUMENT PLUS $0.03 PER PAGE.

ABSTRACT: THIS IS THE TRAINEE MANUAL FOR A TRAINING COURSE ON ACTIVATED SLUDGE PROCESS CONTROL. MOST TRAINING FOR OPERATORS HAS FOCUSED ON MAINTENANCE. MAINTENANCE BY ITSELF IS NOT ENOUGH TO ASSURE GOOD PERFORMANCE. THIS COURSE IS DESIGNED TO HELP TRAIN OPERATORS IN PROCESS CONTROL TECHNIQUES. THE COURSE CONSISTS OF MODULAR LESSONS AND CAN BE TAILORED BY THE INSTRUCTOR TO MEET THE NEEDS OF A SPECIFIC GROUP. MATERIALS ARE DIVIDED INTO 28 SECTIONS PLUS TWO APPENDICES. THE COURSE IS DESIGNED FOR 40 HOURS OF INSTRUCTION. A RELATED DOCUMENT IS THE INSTRUCTOR'S MANUAL (EW 008 863). IN ADDITION A VISUAL AIDS PACKAGE OF 195 35MM. SLIDES IS AVAILABLE FOR PURCHASE OR RENT (EW 008 865).

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW008865

PUBLICATION DATE: 79

TITLE: TRAINING COURSE ON ACTIVATED SLUDGE PROCESS CONTROL - VISUAL AIDS PACKAGE.

DESCRIPTOR: *ACTIVATED SLUDGE; *ACTIVATED SLUDGE PROCESS CONTROL; *AUDIOVISUAL AIDS; *AUDIO TAPES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS CONTROLS; *SLIDES; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 195 SLIDES/SETP. RENTAL PRICE: MODULES 1-4 $15.00, MODULES 5-15 $15.00, MODULES 16-24 $15.00. TOTAL SET 1-24 $35.00; PURCHASE PRICE: CONTACT EPA FOR DETAILS. RELATED DOCUMENTS ARE THE INSTRUCTOR'S MANUAL (EW 008 863) & TRAINEE'S MANUAL (EW 008 864).

ABSTRACT: THIS PACKAGE CONTAINS SLIDES AND AUDIOTAPES FOR THE TRAINING COURSE ON ACTIVATED SLUDGE PROCESS CONTROL. THE TOTAL SET INCLUDES 195 35MM. SLIDES. THE SLIDES CAN BE RENTED IN SUBSETS AS INDICATED IN THE NOTE FIELD OR PURCHASED. RELATED ITEMS ARE THE INSTRUCTOR'S MANUAL (EW 008 863) AND THE TRAINEE'S MANUAL (EW 008 864).

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW008866

PUBLICATION DATE: MAR 83

TITLE: ENERGY MANAGEMENT TECHNOLOGY - SLUDGE CONDITIONERS SAVE ENERGY IN BOILER WATER SYSTEMS.

DESCRIPTOR: *CHEMICALS; *BOILERS; *COSTS; *ENERGY EFFICIENCY; *EFFICIENCY; *SLUDGE; *SLUDGE CONDITIONERS; *STEAM GENERATING PLANTS

DESCRIPTIVE NOTE: 14,16,18P.

ABSTRACT: SEVERAL ENERGY SAVING METHODS CREATE CONDITIONS WHICH MAKE IT DIFFICULT TO MAINTAIN HEAT EXCHANGE SURFACES IN THE CLEANEST POSSIBLE CONDITIONS FOR DESIRED OPERATIONAL EFFICIENCIES. TYPES OF SLUDGE CONDITIONING CHEMICALS AND THEIR EFFECTIVENESS ARE DESCRIBED.

AVAILABILITY: PLANT ENERGY MANAGEMENT; V7 N2

IRIS ACCESSION NUMBER: EW008867

PUBLICATION DATE: FEB 83

TITLE: TESTING NEW SEWERS - HOW TO MAKE SURE YOU GET WHAT YOU PAY FOR.

PERSONAL AUTHOR: KERKES, ROBERT A.

DESCRIPTOR: *CONSTRUCTION; *PERFORMANCE EVALUATION; *SEWERS; *TESTING; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 7-10P.

ABSTRACT: THIS ARTICLE CONTAINS A VARIETY OF IDEAS FOR TESTING NEW SEWERS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION HIGHLIGHTS; V20 N2

IRIS ACCESSION NUMBER: EW008868

PUBLICATION DATE: FEB 83

TITLE: TESTING TIPS FROM A CONTRACTOR.

PERSONAL AUTHOR: JOHNSON, BRYAN

DESCRIPTOR: *CONSTRUCTION; *COSTS; *PERFORMANCE EVALUATION; *PRODUCT EVALUATION; *PIPES; *SEWERS; *TESTING; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 10-11P.

ABSTRACT: THIS ARTICLE PROVIDES SEVERAL TIPS FOR TESTING SEWER PIPES AFTER CONSTRUCTION.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION HIGHLIGHTS; V20 N2

IRIS ACCESSION NUMBER: EW008869

PUBLICATION DATE: FEB 83

TITLE: SMALL COMPUTER HANDLES BIG TASKS AT TREATMENT PLANT.

PERSONAL AUTHOR: LUND, GARY

DESCRIPTOR: ADMINISTRATION; *COMPUTER APPLICATIONS; *DATA MANAGEMENT; FACILITIES; *MAINTENANCE; *MANAGEMENT; *PROCESS CONTROL; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 12-13P.

ABSTRACT: DESCRIBED IS THE USE OF A MICROCOMPUTER AT A WASTEWATER TREATMENT PLANT IN NEBRASKA. THE MICROCOMPUTER IS USED FOR A VARIETY OF JOBS INCLUDING DATA MANAGEMENT, PROCESS CONTROL, TIME MANAGEMENT, PREVENTIVE MAINTENANCE, AND COMPLETED MAINTENANCE.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION HIGHLIGHTS; V20 N2

IRIS ACCESSION NUMBER: EW008870

PUBLICATION DATE: FEB 83

TITLE: CERTIFICATION QUIZ.

DESCRIPTOR: *CERTIFICATION; *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *TESTING; *TEST ITEMS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 14P.

ABSTRACT: TWELVE MULTIPLE CHOICE QUESTIONS RELATED TO OPERATOR CERTIFICATION ARE PRESENTED.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION HIGHLIGHTS; V20 N2

IRIS ACCESSION NUMBER: EW008871

PUBLICATION DATE: APR 83

TITLE: MANAGING COUNTYWIDE WATER SERVICES WITH SATELLITE SYSTEMS.

PERSONAL AUTHOR: WUBBENA, ROBERT L.; MAXWELL, JOHN M.

DESCRIPTOR: *COSTS; *MANAGEMENT; *OPERATING PROCEDURES; *POLICIES; *REGULATORY AREAS; *SATELLITE SYSTEMS; *SMALL WATER SYSTEMS; *WATER DISTRIBUTION; *WATER SERVICES; *WATER SUPPLY; *WASHINGTON; *WATER UTILITIES

DESCRIPTIVE NOTE: 158-163P.

ABSTRACT: ENABLING STATE LEGISLATION IN WASHINGTON HAS PROVIDED THE OPPORTUNITY TO DEVELOP COUNTYWIDE SATELLITE SYSTEM PROGRAMS FOR SMALL WATER UTILITIES. INDIVIDUAL WATER PURVEYORS CAN APPLY FOR THE LEVEL OF ASSISTANCE DESIRED FROM THE LEAD WATER UTILITY. THE PROGRAM AS IMPLEMENTED IN STEVENS COUNTY IS DESCRIBED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N4

IRIS ACCESSION NUMBER: EW008872

PUBLICATION DATE: APR 83

TITLE: ORGANIZING AND MANAGING SOUTH DAKOTA'S RURAL WATER SYSTEMS.

PERSONAL AUTHOR: DAVIS, DENNIS N.

DESCRIPTOR: *MANAGEMENT; *PLANNING; *RURAL AREAS; *SOUTH DAKOTA; *TRAINING; *WATER SYSTEMS; *WATER SUPPLY; *WATER UTILITIES

DESCRIPTIVE NOTE: 164-167P.

ABSTRACT: WITHIN THE PAST DECADE PUBLIC WATER SERVICE HAS BEEN BROUGHT TO SOME 80,000 RURAL RESIDENTS OF SOUTH DAKOTA, AND WATER SERVICE IS EXPECTED TO BE EXTENDED TO MANY MORE RURAL FAMILIES IN THE COMING YEARS. WATER DISTRICTS ARE TYPICALLY ORGANIZED BY A SMALL GROUP OF CITIZENS AND ARE MANAGED BY A BOARD OF DIRECTORS UNTIL OPERATOR-MANAGERS CAN BE HIRED AND TRAINED. THE REGIONAL WATER ASSOCIATION ASSISTS WITH REGIONAL MANAGEMENT WORKSHOPS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N4

IRIS ACCESSION NUMBER: EW008873

PUBLICATION DATE: APR 83

TITLE: THE LATIN AMERICAN APPROACH TO IMPROVING WATER SUPPLIES.

PERSONAL AUTHOR: WAGNER, E. GLENN

DESCRIPTOR: ADMINISTRATION; BRAZIL; COSTS; DESIGN; FINANCING; *LATIN AMERICA; FACILITIES; *PERFORMANCE EVALUATION; PLANNING; *REGIONAL SYSTEMS; *SMALL WATER SYSTEMS; STANDARDS; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 168-173P.

ABSTRACT: CONSTRUCTION COSTS FOR SMALL WATER SYSTEMS IN LATIN AMERICA ARE A FRACTION OF THOSE IN THE UNITED STATES. MOST ECONOMIES ARE ACHIEVED BY REGIONAL OR NATIONAL METHODS OF FINANCING AND CONTROL OR BY STANDARDIZED DESIGN OF TREATMENT FACILITIES, INCLUDING MODULAR AND PREFABRICATED COMPONENTS. MANY OF THESE CONCEPTS COULD BE ADAPTED FOR USE IN THE UNITED STATES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N4

IRIS ACCESSION NUMBER: EW008874

PUBLICATION DATE: APR 83

TITLE: MANAGEMENT TRAINING PROGRAMS FOR SMALL WATER UTILITIES.

PERSONAL AUTHOR: BURKE, CLYDE A.

DESCRIPTOR: COSTS; *INSTRUCTION; *MANAGEMENT; *PLANNING; *SUPERVISORS; *TRAINING; *WATER UTILITIES; WATER TREATMENT

DESCRIPTIVE NOTE: 174-176P.

ABSTRACT: WATER UTILITY SUPERVISORS OFTEN DO NOT HAVE MANAGERICAL SKILLS, BUT THESE SKILLS CAN BE DEVELOPED WITH TRAINING. GOALS FOR PARTICIPANTS MUST BE DEFINED SO THAT THE OBJECTIVES OF THE TRAINING PROGRAMS CAN BE ACHIEVED IN IMPROVED JOB PERFORMANCE AT THE LEAST COST TO THE UTILITY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N4

IRIS ACCESSION NUMBER: EW008875

PUBLICATION DATE: APR 83

TITLE: EVALUATING THE ECONOMICS OF ALTERNATIVE TECHNOLOGY FOR SMALL WATER SYSTEMS.

PERSONAL AUTHOR: DEB, ARUN K.; RICHARDS, WILLIAM G.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGIES; DESIGN; *COSTS; MANAGEMENT; *PLANNING; *SMALL SYSTEMS; *STANDARDS; WATER SYSTEMS; *WATER UTILITIES; WATER QUALITY; WATMAN; *WATER TREATMENT

DESCRIPTIVE NOTE: 177-183P.

ABSTRACT: UPGRADING SMALL WATER SYSTEMS TO MEET THE REQUIREMENTS OF DRINKING WATER REGULATIONS COULD IMPOSE SEVERE ECONOMIC PENALTIES UNLESS THE MOST ECONOMICAL ALTERNATIVES ARE COMPUTED AND SELECTED. A MODEL, DEVELOPED ORIGINALLY FOR LARGER SYSTEMS, HAS BEEN ADAPTED FOR SMALL SYSTEMS. THE MODEL WAS TESTED WITH TWO HYPOTHETICAL CASES AND TWO ACTUAL CASE STUDIES OF SMALL WATER SYSTEMS IN PENNSYLVANIA.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N4

IRIS ACCESSION NUMBER: EW008876

PUBLICATION DATE: APR 83

TITLE: TETRACHLOROETHYLENE LEACHED FROM LINED ASBESTOS-CEMENT PIPE INTO DRINKING WATER.

PERSONAL AUTHOR: LARSON, CHARLES D; AND OTHERS

DESCRIPTOR: *ASBESTOS-CEMENT PIPE; *CONTAMINATION; *DRINKING WATER; *NEW ENGLAND; *PCE; PIPES; *TETRACHLOROETHYLENE; *VINYL LININGS; *WATER PIPES; *WATER QUALITY; *WATER SUPPLY

DESCRIPTIVE NOTE: 184-190P.

ABSTRACT: DESCRIBED ARE SOME OF THE HISTORY BEHIND THE DEVELOPMENT AND USE OF LINED A/C PIPE, THE REASONS WHY ITS PRODUCTION WAS DISCONTINUED, AND ACTIONS TAKEN TO CORRECT THE PROBLEM.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N4

IRIS ACCESSION NUMBER: EW008877

PUBLICATION DATE: APR 83

TITLE: A STUDY IN SYSTEM REHABILITATION.

DESCRIPTOR: *COSTS; *DESIGN; *MAINE; *PLANNING; *PERFORMANCE EVALUATION; *RURAL AREAS; *SMALL SYSTEMS; *SYSTEM IMPROVEMENTS; *WATER DISTRIBUTION; *WATER SUPPLY

DESCRIPTIVE NOTE: 98,100NEWSP.

ABSTRACT: DESCRIBED IS A STUDY OF A WATER SYSTEM IN MAINE. THE STUDY WAS DESIGNED TO DETERMINE THE DISTRICT'S WATER DISTRIBUTION REQUIREMENTS AND CAPABILITIES PRIOR TO DEVELOPING A MASTER PLAN FOR NEEDED IMPROVEMENTS. A TWO PHASE CONSTRUCTION PROGRAM WAS DEVELOPED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V75 N4

IRIS ACCESSION NUMBER: EW008878

PUBLICATION DATE: APR 83

TITLE: AERATED LAGOON SYSTEMS WITH IMPROVED PERFORMANCE.

PERSONAL AUTHOR: RICH, LINVIL

DESCRIPTOR: *AERATED LAGOONS; *AERATION; *DESIGN; *LAGOONS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 35-36P.

ABSTRACT: DISCUSSED ARE WAYS TO ACHIEVE HIGH LEVELS OF PERFORMANCE IN THE AERATION OF WASTEWATER TREATMENT LAGOONS THROUGH USE OF A SIMPLE SYSTEM.

AVAILABILITY: PUBLIC WORKS; V114 N4

IRIS ACCESSION NUMBER: EW008879

PUBLICATION DATE: APR 83

TITLE: A SENSIBLE APPROACH TO WATER ACCOUNTABILITY STUDIES AND LEAKAGE SURVEYS.

PERSONAL AUTHOR: SUNDIN, H. S.

DESCRIPTOR: *ACCOUNTABILITY; *LEAKAGE; *MANAGEMENT; *REVENUE; *SURVEYS; *WATER LOSSES; *WATER DISTRIBUTION; *WATER USE; *WATER SUPPLY

DESCRIPTIVE NOTE: 38,86P.

ABSTRACT: LEAKAGE SURVEYS ARE EXPENSIVE. LESS COSTLY LINES OF INVESTIGATION THAT SHOULD BE TAKEN FIRST ARE OUTLINED.

AVAILABILITY: PUBLIC WORKS; V114 N4

IRIS ACCESSION NUMBER: EW008880

PUBLICATION DATE: APR 83

TITLE: OZONATION FOR EFFECTIVE THM CONTROL.

PERSONAL AUTHOR: WAGNER, ROLFE; ELEFRITZ, ROBERT A.

DESCRIPTOR: *CHLORINATION; *ORGANIC COMPOUNDS; *OZONATION; OPERATIONS (WATER); *THM; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 46-49P.

ABSTRACT: A NEW PROCESS USING OZONATION WAS RECENTLY DEVELOPED AND DEMONSTRATED FOR A MUNICIPALITY TREATING STRONGLY ORGANIC SURFACE WATER.

AVAILABILITY: PUBLIC WORKS; V114 N4

IRIS ACCESSION NUMBER: EW008881

PUBLICATION DATE: APR 83

TITLE: GRASSY SWALES PROVE COST-EFFECTIVE FOR WATER POLLUTION CONTROL.

PERSONAL AUTHOR: KERCHER, WILLIAM C.; AND OTHERS

DESCRIPTOR: *GRASSY SWALES; *SURFACE RUNOFF; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 53-54P.

ABSTRACT: STUDIES CONFIRM THAT GRASSY SWALES REDUCE POLLUTANT-CARRYING RUNOFF FROM RESIDENTIAL AREAS.

AVAILABILITY: PUBLIC WORKS; V114 N4

IRIS ACCESSION NUMBER: EW008882

PUBLICATION DATE: MAR 83

TITLE: NITRIFICATION FACILITIES START-UP AND INITIAL OPERATION.

PERSONAL AUTHOR: BAILEY, WALTER F.; AND OTHERS

DESCRIPTOR: *DISTRICT OF COLUMBIA; *OPERATIONS (WASTEWATER); *NITRIFICATION; *PROCESS CONTROL; *RECORDS; *STANDARDS; *TRAINING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 221-228P.

ABSTRACT: THE USE OF SEVERAL SMALL TASK GROUPS UNDER THE CONTROL OF A START-UP COORDINATING COMMITTEE WAS THE KEY TO BRINGING THE PLANT ON STREAM EFFICIENTLY. TESTING EQUIPMENT, TRAINING STAFF, DEVELOPING STANDARDS, MAINTAINING RECORDS, AND USING PROCESS TUNING WERE IMPORTANT ACTIVITIES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N3

IRIS ACCESSION NUMBER: EW008883

PUBLICATION DATE: MAR 83

TITLE: DETERMINATION OF NUISANCE ODOR IN A COMMUNITY.

PERSONAL AUTHOR: BRUVOLD, W. H.; AND OTHERS

DESCRIPTOR: *AIR POLLUTION CONTROL; *CALIFORNIA; *HYDROGEN SULFIDE; *MONITORING; *ODORS; *ODOR CONTROL; *PUBLIC OPINION; *SURVEYS

DESCRIPTIVE NOTE: 229-233P.

ABSTRACT: JUDICIOUS USE OF AIR SAMPLING TECHNIQUES AND SURVEYS OF RESIDENTS CAN PROVIDE AMPLE DOCUMENTATION OF WHETHER A SIGNIFICANT ODOR PROBLEM EXISTS. A STUDY WAS CONDUCTED IN NOVATO AND PACIFICA, CALIFORNIA AND DATA ARE REPORTED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N3

IRIS ACCESSION NUMBER: EW008884

PUBLICATION DATE: MAR 83

TITLE: FACTORS AFFECTING THE CLARIFICATION PERFORMANCE OF ACTIVATED SLUDGE FINAL SETTLERS.

PERSONAL AUTHOR: TUNTOOLAVEST, MUNSIN; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *CLARIFICATION; *DESIGN; *OPERATIONS (WASTEWATER); *PROCESS CONTROL; *RESEARCH REPORTS; *SETTLING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 234-248P.

ABSTRACT: EXPERIMENTS WERE CONDUCTED TO DETERMINE VARIABLES AFFECTING CLARIFICATION PERFORMANCE OF ACTIVATED SLUDGE FINAL SETTLERS. CONCENTRATION OF MIXED LIQUOR SUSPENDED SOLIDS HAD A GREATER EFFECT ON EFFLUENT SUSPENDED SOLIDS THAN OTHER VARIABLES STUDIED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N3

IRIS ACCESSION NUMBER: EW008885

PUBLICATION DATE: MAR 83

TITLE: HEAT RECOVERY, FLOW EQUALIZATION, AND ALTERNATE DISCHARGE HIGHLIGHT AWT EXPANSION.

PERSONAL AUTHOR: SHIMP, GARY F.; AND OTHERS

DESCRIPTOR: *COLORADO; *HEAT RECOVERY; *EFFLUENT DISCHARGE; *FLOW EQUALIZATION; *FACILITIES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 249-254P.

ABSTRACT: A NUMBER OF UNIQUE SOLUTIONS WERE DEVELOPED TO SOLVE SITE-SPECIFIC PROBLEMS WHILE MAXIMIZING THE USE OF EXISTING FACILITIES AT A COLORADO WASTEWATER TREATMENT FACILITY. PROBLEMS CONSIDERED WERE HEAT RECOVERY, EFFLUENT DISCHARGE, FLOW EQUALIZATION, AND FACILITY ARRANGEMENTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N3

IRIS ACCESSION NUMBER: EW008886

PUBLICATION DATE: MAR 83

TITLE: PHYSICAL DESIGN OF OVERLAND FLOW SYSTEMS.

PERSONAL AUTHOR: SMITH, ROBERT G.; SCHROEDER, EDWARD D.

DESCRIPTOR: *DESIGN; *LAND APPLICATION; *OVERLAND FLOW; *PERFORMANCE EVALUATION; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 255-260P.

ABSTRACT: WHEN PROPERLY DESIGNED, OVERLAND FLOW SYSTEMS CAN PROVIDE INEXPENSIVE SOLUTIONS TO MUNICIPAL WASTEWATER TREATMENT PROBLEMS. PROBLEMS ASSOCIATED WITH A NUMBER OF INSTALLATIONS IN THE U.S. ARE DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N3

IRIS ACCESSION NUMBER: EW008887

PUBLICATION DATE: MAR 83

TITLE: VELOCITY AND SUSPENDED SOLIDS DISTRIBUTION IN SETTLING TANKS.

PERSONAL AUTHOR: TRY, ANDREW JOO-HWA; HEINKE, GARY W.

DESCRIPTOR: *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *SETTLING TANKS; *SUSPENDED SOLIDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 261-269P.

ABSTRACT: MODIFICATION OF AN EXISTING AIR POLLUTION MODEL ALLOWS THE PREDICTION OF SUSPENDED SOLIDS SETTLING RATES IN SETTLING TANKS. CONCLUSIONS ARE DRAWN ON THE RELATIONSHIP OF VELOCITIES IN THE TANK AND SUSPENDED SOLIDS REMOVAL EFFICIENCY.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N3

IRIS ACCESSION NUMBER: EW008888

PUBLICATION DATE: MAR 83

TITLE: TEMPERATURE EFFECTS ON OXYGEN TRANSFER TO ROTATING BIOLOGICAL CONTACTORS.

PERSONAL AUTHOR: RITTMANN, BRUCE E.; AND OTHERS

DESCRIPTOR: *AERATION; *BIOLOGICAL CONTACTORS; *DISSOLVED OXYGEN; *KINETICS; *OPERATIONS (WASTEWATER); *OXYGEN TRANSFER; *RESEARCH REPORTS; *ROTATING BIOLOGICAL CONTACTORS; *TEMPERATURE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 270-277P.

ABSTRACT: LAB-SCALE DATA INDICATE OXYGEN TRANSFER IS A KEY FACTOR TO CONSIDER IN DESIGNING FULL-SIZE ROTATING BIOLOGICAL CONTACTORS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N3

IRIS ACCESSION NUMBER: EW008889

PUBLICATION DATE: MAR 83

TITLE: SLUDGE RECYCLE AND REUSE IN ACID MINE DRAINAGE TREATMENT.

PERSONAL AUTHOR: KEEFER, GARY B.; SACK, WILLIAM A.

DESCRIPTOR: *ACID MINE DRAINAGE; *IRON; *TIME; *MINE DRAINAGE; *NEUTRALIZATION; *RECYCLING; *SLUDGE

DESCRIPTIVE NOTE: 278-284P.

ABSTRACT: BY RECYCLING THE SLUDGE PRODUCED IN MINE DRAINAGE NEUTRALIZATION, LIME REQUIREMENTS FOR THE PROCESS CAN BE REDUCED BY 30%.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N3

IRIS ACCESSION NUMBER: EW008890

PUBLICATION DATE: MAR 83

TITLE: BACTERIAL DIE-OFF KINETICS IN WASTE STABILIZATION PONDS.

PERSONAL AUTHOR: POLPRASERT, C.; AND OTHERS

DESCRIPTOR: *BACTERIA; *KINETICS; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *STABILIZATION PONDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 285-296P.

ABSTRACT: KINETIC MODELS OF BACTERIA DIE-OFF CAN BE EXPANDED TO INCLUDE THE EFFECTS OF ALGAE CONCENTRATION AND ORGANIC LOADING.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N3

IRIS ACCESSION NUMBER: EW008891

PUBLICATION DATE: APR 83

TITLE: ACTIVATED SLUDGE PROCESSES AND EFFLUENT STANDARDS.

PERSONAL AUTHOR: NOVAK, JOHN T.; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; *DESIGN; *ENGINEERING; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *STANDARDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 332-335P.

ABSTRACT: SEVERAL RECENT RESEARCH STUDIES HAVE SHOWN THAT THE ACTIVATED SLUDGE PROCESS MAY GENERATE A CONSIDERABLE AMOUNT OF ORGANIC MATERIAL AS A BY-PRODUCT OF MICROBIAL METABOLISM. A CRITICAL ANALYSIS OF THIS OBSERVATION SUGGESTS THAT PROCESS DESIGN MODELS CURRENTLY IN USE ARE NOT VALID. DESIGN MODELS, TREATMENT GOALS, AND OPERATIONAL CONSIDERATIONS ARE DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008892

PUBLICATION DATE: APR 83

TITLE: PERFORMANCE COMPARISON OF THE AIR AND HIGH-PURITY-OXYGEN ACTIVATED SLUDGE SYSTEM.

PERSONAL AUTHOR: NELSON, JOHN K.; PUNTENNEY, JOHN L.

DESCRIPTOR: *AERATION; *ACTIVATED SLUDGE; *CLARIFIER LOADINGS; *COLORADO; *ENERGY CONSUMPTION; *OXYGEN SYSTEMS; *PERFORMANCE EVALUATION; *SLUDGE; *STAFFING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 336-340P.

ABSTRACT: THE DENVER, COLORADO SEWAGE DISPOSAL DISTRICT NO.1 CONDUCTED A 15 MONTH PERFORMANCE EVALUATION. THE OXYGEN SYSTEM WAS USEFUL WITH REDUCED AERATION TANK VOLUMES AND WHERE LARGE DIURNAL BOD VARIATIONS ARE EXPERIENCED. NEITHER SYSTEM WAS SUPERIOR.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008893

PUBLICATION DATE: APR 83

TITLE: ACTIVATED SLUDGE CLARIFIER DESIGN IMPROVEMENTS.

PERSONAL AUTHOR: STUKENBERG, JOHN R.; AND OTHERS

DESCRIPTOR: *CLARIFIERS; *DESIGN; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 341-348P.

ABSTRACT: DESPITE THE 70-YEAR HISTORY OF THE ACTIVATED SLUDGE PROCESS, SEVERAL MISCONCEPTIONS ABOUT CLARIFIER DESIGN NEED TO BE OVERCOME. PROBLEMS AND POSSIBLE SOLUTIONS ARE DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008894

PUBLICATION DATE: APR 83

TITLE: ASSESSMENT OF SECONDARY CLARIFICATION DESIGN CONCEPTS.

PERSONAL AUTHOR: PARKER, DENNY S.

DESCRIPTOR: *AERATION TANKS; *CLARIFIERS; *DESIGN; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 349-359P.

ABSTRACT: WHEN A LOW SUSPENDED SOLIDS LEVEL IS REQUIRED, THERE ARE ALTERNATIVES LESS EXPENSIVE THAN AVAILABLE EFFLUENT FILTRATION. BY CAREFUL ATTENTION TO CLARIFIER DESIGN, AERATION SYSTEM SELECTION, AND ORGANIC LOADING, ACTIVATED SLUDGE PROCESS EFFLUENT SS LEVELS CAN BE MINIMIZED. CLARIFICATION AND AERATION TANK DESIGN CONSIDERATIONS ARE DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008895

PUBLICATION DATE: APR 83

TITLE: METHOD FOR ESTIMATING THE CAPACITY OF AN ACTIVATED SLUDGE PLANT.

PERSONAL AUTHOR: RIDDELL, M. DONALD R.; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE PROCESS; *DESIGN; *FACILITIES; *MODELS; *OPERATIONS (WASTEWATER); *OPERATING CAPACITY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 360-368P.

ABSTRACT: TWO MODELS FOR ESTIMATING THE CAPACITY OF AN ACTIVATED SLUDGE PLANT HAVE BEEN DEVELOPED THAT VARY IN COMPLEXITY, BUT BOTH ARE BASED ON PROCESS KINETICS AND SOLIDS FLUX CONSIDERATIONS. THE MODELS ARE DISCUSSED IN DETAIL.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008896

PUBLICATION DATE: APR 83

TITLE: REMOVAL OF PRIORITY POLLUTANTS IN INTEGRATED ACTIVATED SLUDGE-ACTIVATED CARBON TREATMENT SYSTEMS.

PERSONAL AUTHOR: WEBER, WALTER J.; AND OTHERS

DESCRIPTOR: *ACTIVATED CARBON; *ACTIVATED SLUDGE; *DESIGN; *FACILITIES; *LINDANE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 369-376P.

ABSTRACT: REACTOR CONFIGURATIONS AND DEGREE OF MIXING APPEAR TO BE IMPORTANT DETERMINANTS OF ATTAINING EQUILIBRIUM CAPACITY FOR REMOVAL OF PRIORITY POLLUTANTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008897

PUBLICATION DATE: APR 83

TITLE: PERFORMANCE OF SBR ACTIVATED SLUDGE PROCESSES WITH NITRIFICATION/DENITRIFICATION.

PERSONAL AUTHOR: SILVERSTEIN, JOANN; SCHROEDER, E.D.

DESCRIPTOR: *ACTIVATED SLUDGE; *DENITRIFICATION; *NITRIFICATION; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SEQUENCING BATCH REACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 377-384P.

ABSTRACT: THE TIME-VARIANT CONDITIONS INHERENT IN BATCH PROCESSING OFFER SEVERAL OPERATIONAL ADVANTAGES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008898

PUBLICATION DATE: APR 83

TITLE: KINETICS OF BACTERIA AND BACTERIOPHAGES IN ANAEROBIC FILTERS.

PERSONAL AUTHOR: POLPRASERT, CHONGRAK; HOANG, LE H.

DESCRIPTOR: *ANAEROBIC FILTERS; *BACTERIA; *BACTERIOPHAGES; *COLIFORMS; *EFFLUENTS; *KINETICS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SEPTIC TANKS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 385-391P.

ABSTRACT: ANAEROBIC FILTRATION OF SEPTIC TANK EFFLUENTS WAS STUDIED. THE RATE OF REMOVAL OF COLIFORMS AND BACTERIOPHAGE BY BIOFILM ADSORPTION FOLLOWED A FIRST-ORDER REACTION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008899

PUBLICATION DATE: APR 83

TITLE: MONITORING FOR WATER QUALITY: FIXED STATIONS VERSUS INTENSIVE SURVEYS.

PERSONAL AUTHOR: BELLE, GERALD VAN; HUGHES, JAMES P.

DESCRIPTOR: *MONITORING; *MONITORING NETWORKS; *RECOMMENDATIONS; *SURVEYS; *TRENDS; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 400-404P.

ABSTRACT: A NETWORK DESIGNED TO DETECT LONG-TERM TRENDS WILL NOT BE ADEQUATE FOR EXPLAINING SHORT-TERM VARIATIONS. INTENSIVE SURVEYS ARE NEEDED TO EXPLAIN SHORT-TERM FLUCTUATIONS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008900

PUBLICATION DATE: APR 83

TITLE: ACTIVE VERSUS PASSIVE WATER QUALITY MONITORING PROGRAMS FOR WASTEWATER DISCHARGES.

PERSONAL AUTHOR: LEE, G. FRED; JONES, ANNE

DESCRIPTOR: *DATA ANALYSIS; *EFFLUENTS; *HAZARD ASSESSMENT; *MONITORING; *RECOMMENDATIONS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 405-407P.

ABSTRACT: A HAZARD ASSESSMENT APPROACH SHOULD GUIDE BOTH THE DEVELOPMENT OF A MONITORING PROGRAM AND THE INTERPRETATION OF THE RESULTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008901

PUBLICATION DATE: APR 83

TITLE: INCORPORATING THE STOCHASTIC NATURE OF WATER QUALITY INTO MANAGEMENT.

PERSONAL AUTHOR: WARD, ROBERT C.; LOFTIS, JIM C.

DESCRIPTOR: *DATA ANALYSIS; *DATA COLLECTION; *DETERMINISTIC CONCEPTS; *MANAGEMENT; *MONITORING; *PLANNING; *STANDARDS; *STOCHASTIC CONCEPTS; *WATER QUALITY

DESCRIPTIVE NOTE: 408-414P.

ABSTRACT: WATER QUALITY INVOLVES A MIX OF DETERMINISTIC AND STOCHASTIC CONCEPTS, AND IT CAN BE EFFECTIVELY MANAGED ONLY WHEN BOTH COMPONENTS ARE PROPERLY BALANCED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V55 N4

IRIS ACCESSION NUMBER: EW008911

PUBLICATION DATE: APR 83

TITLE: QUALITY CONTROL IN WATER ANALYSES.

PERSONAL AUTHOR: KIRCHMER, CLIFF J.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DEFINITIONS; *LABORATORY TECHNIQUES; *PERFORMANCE EVALUATION; *PRINCIPLES; *WATER ANALYSES; *WATER QUALITY

DESCRIPTIVE NOTE: 174A-181AP.

ABSTRACT: THE DEFINITIONS AND PRINCIPLES UNDERLYING THE PRACTICE OF QUALITY CONTROL IN WATER ANALYSES NEED TO BE CRITICALLY EVALUATED.

AVAILABILITY: ENVIRONMENTAL SCIENCE 8 TECHNOLOGY; V17 N4

IRIS ACCESSION NUMBER: EW008913

PUBLICATION DATE: 83

TITLE: THE PDK GUIDE: AN INTRODUCTION TO MICROCOMPUTER LITERACY FOR EDUCATORS.

PERSONAL AUTHOR: METZCUS, RICHARD H.

DESCRIPTOR: *COMPUTERS; *COMPUTER SOFTWARE; *EQUIPMENT REVIEWS; *EVALUATION; *EVALUATION GUIDES; *INSTRUCTIONAL MATERIALS; *MICROCOMPUTERS; *PERFORMANCE EVALUATION; *PLANNING; *SOFTWARE REVIEWS

DESCRIPTIVE NOTE: 340P.

ABSTRACT: THIS GUIDE IS A BRIEF ORIENTATION TO MICROCOMPUTERS AND THEIR USE IN EDUCATION. SECTIONS ARE INCLUDED IN SOFTWARE (CONCEPTS, CONCERNS, AND SOURCES), HARDWARE, ACQUISITION PLANS, BUYING GUIDE FOR MICROCOMPUTERS, GLOSSARY, AND EVALUATION OF SOFTWARE.

AVAILABILITY: PHI DELTA KAPPA, P. O. BOX 789, BLOOMINGTON, IN 47402

IRIS ACCESSION NUMBER: EW008914

PUBLICATION DATE: 82

TITLE: SURVEY OF EMPLOYMENT OPPORTUNITIES IN WATER RESOURCES - 1982 EDITION.

DESCRIPTOR: CONSULTANTS; CONSULTING; *EMPLOYMENT OPPORTUNITIES; GOVERNMENT AGENCIES; *INFORMATION SOURCES; JOBS; MANUFACTURING; *SURVEYS; UNIVERSITIES; *WATER RESOURCES; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 41P. PRICE: $10.00

ABSTRACT: THIS NATIONWIDE EMPLOYER SURVEY WAS DESIGNED TO PROVIDE INFORMATION ON POTENTIAL EMPLOYMENT OPPORTUNITIES AT CONSULTING FIRMS AND MANUFACTURERS IN WATER RESOURCES RELATED AREAS. IN ADDITION, A LISTING OF STATE GOVERNMENT AGENCIES AND UNIVERSITY GROUPS IN WATER RESOURCES RELATED FIELDS IS PROVIDED.

AVAILABILITY: AMERICAN WATER RESOURCES ASSOCIATION, RENEWABLE NATURAL RESOURCES FOUNDATION CENTER, 5410 GROSVENOR LANE, SUITE 220, BETHESDA, MD 20814

IRIS ACCESSION NUMBER: EW008915

PUBLICATION DATE: 82

TITLE: BASIC MANAGEMENT PRINCIPLES FOR SMALL WATER SYSTEMS.

DESCRIPTOR: *ADMINISTRATION; *ACCOUNTING; *BUDGETING; *MANAGEMENT; *MAINTENANCE; *OPERATIONS (WATER); *PLANNING; *RECORDKEEPING; *SMALL SYSTEMS; *UTILITIES; *WATER TREATMENT; *WATER UTILITIES

DESCRIPTIVE NOTE: 125P. PRICE: $18.20 (20222QK)

ABSTRACT: THIS HANDBOOK IS AN ADAPTATION OF MATERIALS DEVELOPED BY THE AWWA IN 1981 TO IMPROVE SYSTEM MANAGEMENT OF WATER AND SANITATION FACILITIES ON INDIAN LANDS. THE MATERIALS COVERED IN THIS BOOK CONSIDER OPERATIONS AND MANAGEMENT, PERSONNEL ADMINISTRATION, RECORDKEEPING, MAINTENANCE, AND ACCOUNTING AND BUDGETING. THESE MATERIALS WILL BE USEFUL TO PEOPLE INVOLVED IN MANAGEMENT OF SMALL-TO MEDIUM SIZE WATER UTILITIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, DATA PROCESSING DEPT., 6666 WEST QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW008917

TITLE: WASTEWATER COLLECTION SYSTEM OPERATOR CERTIFICATION STUDYBOOK AND ANSWER BOOKLET.

DESCRIPTOR: *CERTIFICATION; COLLECTION SYSTEMS; DESIGN; EQUIPMENT; *INSTRUCTIONAL MATERIALS; MAINTENANCE; MANAGEMENT; *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *POST SECONDARY EDUCATION; SAFETY; *WASTEWATER COLLECTION; *WORKBOOKS

DESCRIPTIVE NOTE: 124P. PRICE: $10.00

ABSTRACT: THE PURPOSE OF THIS WORKBOOK IS TO ASSIST WASTEWATER COLLECTION SYSTEM PERSONNEL IN EXPANDING THEIR KNOWLEDGE AND TO ASSIST THEM IN PREPARING FOR CERTIFICATION. QUESTIONS AND ANSWERS ARE INCLUDED IN THIS WORKBOOK UNDER THE FOLLOWING TOPICS: BACKGROUND KNOWLEDGE, SUPPORT SYSTEMS OPERATION AND MAINTENANCE, SUPERVISION AND MANAGEMENT, SAFETY PROCEDURES, DESIGN AND NEW CONSTRUCTION, ELECTRICAL, PUMPS AND MOTORS, AND MATHEMATICS.

AVAILABILITY: ENVIRONMENTAL EDUCATIONAL SERVICES, P. O. BOX 672, CONCORD, MA 01742

IRIS ACCESSION NUMBER: EW008918

PUBLICATION DATE: AUG 80

TITLE: PLANNING CONSIDERATIONS. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: CARNEGIE, JOHN W.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PLANNING; *POST SECONDARY EDUCATION; *SLUDGE; *TEACHING GUIDES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 21 PAGES, STUDENT WORKBOOK 21 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON IS A DESCRIPTION OF THE GENERAL CHARACTERISTICS OF SLUDGE. IT IS INTENDED AS INTRODUCTORY MATERIAL. INCLUDED ARE AN INSTRUCTOR'S GUIDE AND A STUDENT WORKBOOK. INCLUDED IN THE GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEETS, STUDENT MATERIALS, AND NARRATIVES TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. THE STUDENT MATERIALS INCLUDE OBJECTIVES, A GLOSSARY, DISCUSSION OF SLUDGE CHARACTERISTICS, REFERENCES AND A WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008919

PUBLICATION DATE: AUG 80

TITLE: SLUDGE CHARACTERISTICS. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: KLOPPING, PAUL H.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *SLUDGE; *SLUDGE CHARACTERISTICS; *TEACHING GUIDES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 20 PAGES, STUDENT WORKBOOK 23 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL

RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON DEALS WITH THE SPECIAL CONSIDERATIONS THAT SHOULD BE MADE WHEN CHOOSING A SLUDGE SOLIDS MANAGEMENT PROGRAM. INCLUDED ARE AN INSTRUCTOR'S GUIDE AND A STUDENT WORKBOOK FOR PLANNING CONSIDERATIONS. INCLUDED IN THE GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEETS, STUDENT MATERIALS, AND NARRATIVES TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. THE STUDENT MATERIALS INCLUDE OBJECTIVES, PLANNING CONSIDERATION TEXT, REFERENCES, AND WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008920

PUBLICATION DATE: AUG 80

TITLE: SLUDGE CONDITIONING. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: CARNEGIE, JOHN W.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *SLUDGE CONDITIONING; *TEACHING GUIDES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 20 PAGES, STUDENT WORKBOOK 19 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON IS AN INTRODUCTION TO CONDITIONING. THE LESSON COVERS A BRIEF EXPLANATION OF COLLOIDAL SYSTEMS; THEORY OF CHEMICAL AND HEAT CONDITIONING; AND EQUIPMENT AND OPERATIONS. INCLUDED ARE AN INSTRUCTOR'S GUIDE AND A STUDENT WORKBOOK. INCLUDED IN THE GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEETS, STUDENT MATERIALS, AND NARRATIVES TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. THE STUDENT MATERIALS INCLUDE OBJECTIVES, A GLOSSARY, THEORY OF CONDITIONING, CONDITIONING EQUIPMENT, CONDITIONING OPERATIONS, AIDS TO CONDITIONING, REFERENCES, AND A WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008921

PUBLICATION DATE: AUG 80

TITLE: GRAVITY THICKENING. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: KLOPPING, PAUL H.

DESCRIPTOR: *GRAVITY THICKENERS; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *TEACHING GUIDES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 20 PAGES, STUDENT WORKBOOK 21 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON CONSIDERS THE BASIC OPERATION OF THE GRAVITY THICKENER. IT COVERS THE THEORY OF OPERATION AND DESCRIBES COMPONENTS FOUND IN A TYPICAL THICKENER. ATTENTION IS GIVEN TO MATH CONCEPTS THAT ARE USED IN CONTROLLING HYDRAULIC LOADING, DETENTION TIME, AND MATERIAL BALANCE. INCLUDED ARE AN INSTRUCTOR'S GUIDE AND A STUDENT WORKBOOK. THE GUIDE INCLUDES A DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEETS, STUDENT MATERIALS, AND NARRATIVES TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. THE STUDENT MATERIAL INCLUDES PLANT FLOW DIAGRAMS, OBJECTIVES, A GLOSSARY, DISCUSSION OF GRAVITY THICKENING, REFERENCES, AND A WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008922

PUBLICATION DATE: AUG 80

TITLE: FLOTATION THICKENING. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: KLOPPING, PAUL H.

DESCRIPTOR: *AIR FLOTATION THICKENING; *FLOTATION THICKENING; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *TEACHING GUIDES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 21 PAGES, STUDENT WORKBOOK 20 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON DESCRIBES THE PROCESS OF DISSOLVED AIR FLOTATION THICKENING. THE MATERIAL IS INTENDED TO ACQUAINT THE STUDENT WITH THE FUNDAMENTAL PRINCIPLES OF OPERATION, A COMPARISON WITH OTHER THICKENING PROCESSES, AND THE CALCULATIONS AND LAB TESTS REQUIRED IN ESTABLISHING A

NORMAL OPERATING ROUTINE. AN INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK ARE INCLUDED. THE GUIDE INCLUDES A DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEETS, STUDENT MATERIALS, AND NARRATIVES TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. THE STUDENT MATERIALS INCLUDE PLANT FLOW DIAGRAMS, OBJECTIVES, GLOSSARY, DISCUSSION OF FLOTATION THICKENING, REFERENCES, AND WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008923

PUBLICATION DATE: AUG 80

TITLE: AEROBIC DIGESTION. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: KLOPPING, PAUL H.

DESCRIPTOR: *AEROBIC DIGESTION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *TEACHING GUIDES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 17 PAGES, STUDENT WORKBOOK 19 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON IS A BASIC DESCRIPTION OF AEROBIC DIGESTION. IT INCLUDES A GENERAL PROCESS OVERVIEW AND DISCUSSION OF A TYPICAL DIGESTER'S COMPONENTS, THE FACTORS INFLUENCING PERFORMANCE, OPERATIONAL CONTROLS, AND AN EMPHASIS ON THE BIOLOGICAL CONSIDERATIONS OF SUCCESSFUL OPERATION. INCLUDED ARE AN INSTRUCTOR'S GUIDE AND A STUDENT MANUAL. THE GUIDE INCLUDES A DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEETS. STUDENT MATERIALS, AND NARRATIVES TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. INCLUDED IN THE STUDENT MATERIALS ARE PLANT FLOW DIAGRAMS, OBJECTIVES, GLOSSARY, DISCUSSION OF AEROBIC DIGESTION, REFERENCES, AND WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008924

PUBLICATION DATE: AUG 80

TITLE: ANAEROBIC DIGESTION I. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: ARASMITH, E. E.

DESCRIPTOR: *ANAEROBIC DIGESTION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *TEACHING GUIDES

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 19 PAGES, STUDENT WORKBOOK 19 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON, PART I OF A TWO-PART SERIES ON ANAEROBIC DIGESTION, DISCUSSES THE FIVE BASIC FUNCTIONS OF AN ANAEROBIC DIGESTER, THE BASIC THEORY OF THE BIOLOGICAL PROCESS, EQUIPMENT FOR DIGESTION, AND PRODUCTS. INCLUDED ARE THE INSTRUCTOR'S GUIDE AND THE STUDENT WORKBOOK FOR ANAEROBIC DIGESTION I. INCLUDED IN THE GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, SUGGESTED SEQUENCE, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEET, STUDENT MATERIALS, AND NARRATIONS TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. THE STUDENT WORKBOOK CONTAINS MATERIAL ON PLANT FLOW DIAGRAMS, OBJECTIVES, GLOSSARY, DIGESTER FUNCTION, EQUIPMENT, THEORY, BY-PRODUCTS, REFERENCES, AND A WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008925

PUBLICATION DATE: AUG 80

TITLE: ANAEROBIC DIGESTION II. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: ARASMITH, E. E.

DESCRIPTOR: *ANAEROBIC DIGESTION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *TEACHING GUIDES

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 22 PAGES, STUDENT WORKBOOK 24 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON, PART II OF A TWO PART SERIES ON ANAEROBIC DIGESTION, DISCUSSES THE CLASSIFICATION OF DIGESTER BY FUNCTION, ROOF DESIGN, TEMPERATURE RANGE, MIXING SYSTEMS, GAS SYSTEM COMPONENTS, OPERATIONS, AND SAFETY. INCLUDED ARE AN INSTRUCTOR'S GUIDE AND THE STUDENT WORKBOOK FOR ANAEROBIC DIGESTION II. INCLUDED IN THE GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEET, STUDENT MATERIALS, AND NARRATIVES TO 35MM

SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. THE STUDENT WORKBOOK CONTAINS MATERIALS ON PLANT FLOW DIAGRAMS, OBJECTIVES, GLOSSARY, VARIOUS OPERATIONS, SAMPLING AND TESTING, SAFETY, REFERENCES, AND A WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008926

PUBLICATION DATE: AUG 80

TITLE: DRYING BEDS. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: KLOPPING, PAUL H.

DESCRIPTOR: *DRYING BEDS; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *TRAINING GUIDES

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 19 PAGES, STUDENT WORKBOOK 17 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON IS AN INTRODUCTION TO SLUDGE DRYING BEDS. THE MODULE CONSIDERS BOTH SAND AND SURFACED DRYING BEDS. INCLUDED ARE THE INSTRUCTOR'S GUIDE AND THE STUDENT WORKBOOK FOR DRYING BEDS. INCLUDED IN THE GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEET, STUDENT MATEIALS, AND NARRATIVES TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. INCLUDED IN THE STUDENT WORKBOOK ARE MATERIALS ON PLANT FLOW DIAGRAMS, OBJECTIVES, GLOSSARY, DISCUSSION OF DRYING BEDS, REFERENCES, AND A WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008927

PUBLICATION DATE: AUG 80

TITLE: CENTRIFUGATION. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: BEST, RICHARD A.

DESCRIPTOR: *CENTRIFUGES; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *TEACHING GUIDES; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *VOLUME REDUCTION

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 15 PAGES, STUDENT WORKBOOK 24 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON IS AN INTRODUCTORY DESCRIPTION OF THE USE OF CENTRIFUGES IN THE PROCESS OF VOLUME REDUCTION. THE LESSON DISCUSSES THE THREE BASIC CENTRIFUGES. INCLUDED ARE THE INSTRUCTOR'S GUIDE AND THE STUDENT WORKBOOK FOR CENTRIFUGATION. INCLUDED IN THE GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEET, AND STUDENT MATERIALS, INCLUDED IN THE STUDENT WORKBOOK ARE MATERIALS ON OBJECTIVES, GLOSSARY, FLOW DIAGRAMS, THEORY OF CENTRIFUGES, TYPES OF CENTRIFUGES, COMPARISONS AND TESTINGS, REFERENCES, AND WORKSHEETS.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008928

PUBLICATION DATE: AUG 80

TITLE: VACUUM FILTRATION. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: FILER, HERB; WINDRAM, KENDALL

DESCRIPTOR: *FILTRATION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *VACUUM FILTRATION; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 16 PAGES, STUDENT WORKBOOK 29 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON DESCRIBES THE OPERATION OF THE VACUUM FILTER AND THE HISTORY AND THREE TYPES OF VACUUM FILTERS. INCLUDED ARE THE INSTRUCTOR'S GUIDE AND THE STUDENT WORKBOOK FOR VACUUM FILTRATION. INCLUDED IN THIS GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, LECTURE OUTLINE, ANSWERS TO WORKSHEET, AND STUDENT MATERIALS. INCLUDED IN THE STUDENT MATERIALS ARE PLANT FLOW DIAGRAMS, OBJECTIVES, A GLOSSARY, THE VACUUM FILTRATION TEXT, REFERENCES, AND A WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008929

PUBLICATION DATE: AUG 80

TITLE: SLUDGE INCINERATION-MULTIPLE HEARTH FURNACE. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: KLOPPING, PAUL H.

DESCRIPTOR: *INCINERATION; *INSTRUCTIONAL MATERIALS; *MULTIPLE HEARTH FURNACE; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *TEACHING GUIDES

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 20 PAGES, STUDENT WORKBOOK 23 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON IS AN INTRODUCTION TO SLUDGE INCINERATION. THE MATERIAL IS RATHER TECHNICAL AND ASSUMES AN UNDERSTANDING OF BASIC PLANT OPERATION. INCLUDED ARE THE INSTRUCTOR'S GUIDE AND THE STUDENT WORKBOOK FOR SLUDGE INCINERATION-MULTIPLE HEARTH FURNACE. INCLUDED IN THIS GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEET, STUDENT MATERIALS, AND NARRATIVES TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. INCLUDED IN THE STUDENT WORKBOOK ARE MATERIALS ON PLANT FLOW DIAGRAMS, OBJECTIVES, GLOSSARY, SLUDGE INCINERATION, REFERENCES, AND A WORKSHEET.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008930

PUBLICATION DATE: AUG 80

TITLE: SANITARY LANDFILL. SLUDGE TREATMENT AND DISPOSAL COURSE 166. INSTRUCTOR'S GUIDE AND STUDENT WORKBOOK.

PERSONAL AUTHOR: SHARMAN, RONALD M.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *LANDFILLS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SITE SELECTION; *SLUDGE; *SANITARY LANDFILLS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INSTRUCTOR'S GUIDE 20 PAGES, STUDENT WORKBOOK 26 PAGES. ALSO AVAILABLE FROM EPA/INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD., 3RD FLOOR, COLUMBUS, OH 43212, PRICES FROM EPA ARE AVAILABLE UPON REQUEST.

ABSTRACT: THIS LESSON IS AN INTRODUCTION TO DISPOSAL OF SLUDGE BY LANDFILL. A BRIEF EXPLANATION OF THE COMPLETE PROCESS IS GIVEN INCLUDING SLUDGE SUITABILITY AND SITE CONSIDERATIONS. INCLUDED ARE THE INSTRUCTOR'S GUIDE AND THE STUDENT WORKBOOK FOR SANITARY LANDFILL. INCLUDED IN THIS GUIDE ARE DESCRIPTION OF THE LESSON, ESTIMATED TIME, MATERIALS LIST, SUGGESTED SEQUENCING, READINGS, OBJECTIVES, LECTURE OUTLINE, ANSWERS TO WORKSHEET, STUDENT MATERIALS, AND NARRATIVES TO 35MM SLIDES THAT ARE DESIGNED TO BE USED WITH THIS LESSON. INCLUDED IN THE STUDENT MATERIALS ARE PLANT FLOW DIAGRAMS, OBJECTIVES, GLOSSARY, LANDFILL TEXT, REFERENCES, AND WORKSHEETS.

AVAILABILITY: LINN BENTON COMMUNITY COLLEGE, 6500 SW PACIFIC BLVD., ALBANY, OR 97321 ($1. STUDENT WORKBOOK, $2. INSTRUCTOR'S GUIDE, COST PER ENTIRE SET OF SLIDE-TAPE 1 STUDENT WORKBOOK AND 1 INSTRUCTOR'S GUIDE IS $75. PER UNIT)

IRIS ACCESSION NUMBER: EW008945

PUBLICATION DATE: SEP 82

TITLE: RETENTION AND TRANSFORMATIONS OF SELECTED PESTICIDES AND PHOSPHORUS IN SOIL-WATER SYSTEMS: A CRITICAL REVIEW.

PERSONAL AUTHOR: RAO, P. S. C.; DAVIDSON, J. M.

DESCRIPTOR: *LITERATURE REVIEWS; *NONPOINT SOURCE POLLUTION; *PESTICIDES; *PHOSPHORUS; *RESEARCH REPORTS; *SOILS; *WATER POLLUTION CONTROL; *WATER QUALITY

ABSTRACT: THIS IS A CRITICAL REVIEW OF THE CURRENT STATE-OF-THE-ART FOR MEASURING OR ESTIMATING PESTICIDE RETENTION AND TRANSFORMATION PARAMETERS IN NON-POINT SOURCE POLLUTION MODELS. CONCLUSIONS AND RECOMMENDATIONS BASED ON THE REVIEW ARE PRESENTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008948

PUBLICATION DATE: AUG 82

TITLE: FEASIBILITY OF DEVELOPING A COMPREHENSIVE METHODOLOGY FOR SOURCE IDENTIFICATION AND ENVIRONMENTAL LOADING (MATERIALS BALANCE).

PERSONAL AUTHOR: WECHSLER, A. E.; AND OTHERS

DESCRIPTOR: *ENVIRONMENTAL LOADING; *FEASIBILITY STUDIES; *MATERIALS BALANCE; *MODELS; *RECOMMENDATIONS; *SOURCE IDENTIFICATION; *WATER POLLUTION CONTROL

ABSTRACT: A MATERIALS BALANCE IS DEFINED AS AN ARRAY OF THE FLOWS OF MATERIALS OR CHEMICALS FROM THE CULTURAL ENVIRONMENT TO THE FIRST POINT OF ENTRY INTO THE NATURAL ENVIRONMENT AND INCLUDES INFORMATION REGARDING LOCATION, TIME RATE, QUANTITY AND CHEMISTRY OF THE FLOWS. THE OBJECTIVES OF THIS STUDY WERE TO EXAMINE THE OVERALL FEASIBILITY OF A SYSTEMATIC APPROACH TO SOURCE IDENTIFICATION AND ENVIRONMENTAL LOADING ESTIMATION AND TO OUTLINE THE MOST FEASIBLE MATERIALS BALANCE METHODS AND STEPS NEEDED FOR IMPLEMENTATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008949

PUBLICATION DATE: SEP 82

TITLE: MODELING THE FATE OF TOXIC ORGANIC MATERIALS IN AQUATIC ENVIRONMENTS.

PERSONAL AUTHOR: PARK, R. A.; AND OTHERS

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *COMPUTER APPLICATIONS; *ENVIRONMENT; *MODELS; *ORGANIC COMPOUNDS; *PEST; *SIMULATIONS; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: PB82-254079

ABSTRACT: IN THIS REPORT, DOCUMENTATION IS GIVEN FOR PEST, A SIMULATION MODEL FOR EVALUATING THE FATE OF TOXIC ORGANIC MATERIALS (TOM) IN FRESHWATER ENVIRONMENTS. THE MODEL HAS BEEN VERIFIED WITH PROCESS-LEVEL LABORATORY DATA AND WITH ECOSYSTEM-LEVEL SITE DATA. PEST IS AN INTERACTIVE, USER-ORIENTED MODEL WITH 10 COMMANDS. THE MODEL IS WRITTEN IN STANDARD FORTRAN AND WILL RUN IN 22K ON A PDP 11/03 WITH OVERLAYING. IT HAS ALSO BEEN TESTED ON AN IBM 3033.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008950

PUBLICATION DATE: AUG 82

TITLE: VOLATILIZATION OF ORGANIC POLLUTANTS FROM WATER.

PERSONAL AUTHOR: MACKAY, D.; AND OTHERS

DESCRIPTOR: *CONTAMINANTS; *ENVIRONMENT; *HENRY'S LAW; *LAKES; *ORGANIC COMPOUNDS; *PREDICTION; *RESEARCH REPORTS; *RIVERS; *VOLATILIZATION

DESCRIPTIVE NOTE: PB82-230939

ABSTRACT: THE VOLATILIZATION OF ORGANIC ENVIRONMENTAL CONTAMINANTS FROM WATER BODIES TO THE ATMOSPHERE WAS INVESTIGATED. THE REPORT CONTAINS BOTH THEORETICAL AND EXPERIMENTAL STUDIES AND A COMPREHENSIVE REVIEW OF THE EQUILIBRIUM PHYSICAL CHEMISTRY AND THERMODYNAMICS OF SYSTEMS INVOLVING HYDROPHOBIC ORGANIC SOLUTES AND WATER. A GENERAL PROCEDURE IS SUGGESTED FOR CALCULATING VOLATILIZATION RATES OF SOLUTES FROM RIVERS AND LAKES AND FOR OBTAINING THE NECESSARY FUNDAMENTAL PHYSICAL-CHEMICAL DATA.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008951

PUBLICATION DATE: AUG 82

TITLE: A REVIEW OF AQUATIC HABITAT ASSESSMENT METHODS.

PERSONAL AUTHOR: SCHUYTEMA, GERALD S.

DESCRIPTOR: *AQUATIC HABITATS; *ASSESSMENT TECHNIQUES; *HABITAT ASSESSMENT; *HABITAT PARAMETERS; *LITERATURE REVIEWS; *NATURAL RESOURCES; *RESEARCH METHODOLOGY; *WATER QUALITY

DESCRIPTIVE NOTE: PB82-189648

ABSTRACT: THIS PROJECT WAS AN EXTENSIVE LITERATURE REVIEW OF AQUATIC HABITAT ASSESSMENT TECHNIQUES. THE OBJECTIVE WAS TO HELP WATER QUALITY INVESTIGATORS AND NATURAL RESOURCE MANAGERS UNFAMILIAR WITH SUCH TECHNIQUES TO BECOME AWARE OF THE METHODS AND CURRENT TRENDS IN DEVELOPMENT, AND TO AID IN DECIDING WHAT TECHNIQUES MIGHT BEST FIT PROJECT GOALS. APPROXIMATELY 30 METHODS WERE SUMMARIZED AND COMPARED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008952

PUBLICATION DATE: AUG 81

TITLE: REDUCTION OF TOXICITY TO AQUATIC ORGANISMS BY INDUSTRIAL WASTEWATER TREATMENT.

PERSONAL AUTHOR: CARY, GEORGE A.; BARROWS, MICHAEL E.

DESCRIPTOR: *INDUSTRIAL WASTES; *PERFORMANCE EVALUATION; *PESTICIDES; *RESEARCH REPORTS; *TOXIC SUBSTANCES; *TOXICITY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB-81-222366

ABSTRACT: THE SPECIFIC GOAL OF THIS RESEARCH WAS TO CONDUCT 24-HOUR STATIC ACUTE BIOASSAYS WITH "UNTREATED" INFLUENT AND "TREATED" EFFLUENT USING MINNOWS AND WATER FLEAS TO BIOLOGICALLY EVALUATE THE EFFECTIVENESS OF INDUSTRIAL WASTEWATER FACILITIES IN REDUCING EFFLUENT TOXICITY TO AQUATIC ORGANISMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008953

PUBLICATION DATE: SEP 82

TITLE: RAPID-INFILTRATION SYSTEM FOR WASTEWATER RENOVATION AND BENEFICIAL REUSE.

PERSONAL AUTHOR: BOUWER, HERMAN; AND OTHERS

DESCRIPTOR: *ARIZONA; *EFFLUENT; *INFILTRATION; *IRRIGATION; *OPERATIONS (WASTEWATER); *PROJECT REPORTS; *RECLAIMED WATER; *RECREATION; *RECYCLING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-252941

ABSTRACT: A 16-HA RAPID INFILTRATION WASTEWATER TREATMENT SYSTEM AT PHOENIX, AZ, WAS USED TO TREAT 90 M/YR OF CONVENTIONALLY TREATED EFFLUENT. THE RECLAIMED WATER WAS SUITABLE FOR UNRESTRICTED IRRIGATION AND AQUATIC RECREATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008955

PUBLICATION DATE: AUG 82

TITLE: PERSISTENCE AND DETECTION OF COLIFORMS IN TURBID FINISHED DRINKING WATER.

PERSONAL AUTHOR: SEIDLER, RAMON J.; EVANS, THOMAS M.

DESCRIPTOR: *COLIFORMS; *DISINFECTION; *DRINKING WATER; *CHLORINE DEMAND; *MODELS; *TOTAL ORGANIC CARBON; *TURBIDITY; *WATER TREATMENT

DESCRIPTIVE NOTE: PB82-227752

ABSTRACT: MODELS WERE DEVELOPED THROUGH MULTIPLE LINEAR REGRESSION COMPUTER ANALYSES IN ORDER TO DEFINE THE RELATIONSHIPS BETWEEN TURBIDITY, CHLORINE DEMAND, TOTAL ORGANIC CARBON, AND DISINFECTION EFFICIENCY. THE MODELS WERE BASED ON DATA COLLECTED IN SIX WATERSHEDS OVER A TWO-YEAR PERIOD.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008956

PUBLICATION DATE: AUG 82

TITLE: AN INNOVATIVE COPRECIPITATION TECHNIQUE FOR REMOVING HEAVY METALS FROM WASTEWATER.

PERSONAL AUTHOR: HUANG, JU-CHANG

DESCRIPTOR: *HEAVY METALS; *METALS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SLUDGE; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-227240

ABSTRACT: THIS PROJECT ATTEMPTED TO DEVELOP INNOVATIVE TECHNOLOGY TO REMOVE TOXIC HEAVY METALS FROM RAW MUNICIPAL WASTEWATER WITHOUT SIMULTANEOUSLY REMOVING THE LARGELY ORGANIC SUSPENDED AND SETTLEABLE SOLIDS. SINCE THE PERCENTAGES OF METALS AND SUSPENDED SOLIDS REMOVED WERE APPROXIMATELY THE SAME, THE HOPED-FOR REDUCTIONS IN METAL CONCENTRATIONS IN SLUDGE ARE UNLIKELY TO BE ACHIEVED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008957

PUBLICATION DATE: AUG 82

TITLE: CHLORINE DIOXIDE DISINFECTION AND GRANULAR ACTIVATED CARBON ADSORPTION.

PERSONAL AUTHOR: LYKINS, BEN W.; GRIESE, MARK

DESCRIPTOR: *CHLORINE DIOXIDE; *DISINFECTION; *GRANULAR ACTIVATED CARBON; *OPERATIONS (WATER); *ORGANIC COMPOUNDS; *PILOT STUDIES; *TRIHALOMETHANES; *WATER TREATMENT; *WATER SUPPLY; *WATER QUALITY

DESCRIPTIVE NOTE: PB82-227737

ABSTRACT: A PILOT PLANT STUDY WAS DESIGNED TO EVALUATE CHLORINE DIOXIDE DISINFECTION AS AN ALTERNATIVE TO CHLORINE FOR REDUCING OR PREVENTING THE PRODUCTION OF TRIHALOMETHANES. ALSO INVESTIGATED WAS THE USE OF GRANULAR ACTIVATED CARBON (GAC) IN POST-TREATMENT FOR REMOVAL OF ORGANIC COMPOUNDS. RESULTS AND CONCLUSIONS ARE REPORTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008962

PUBLICATION DATE: AUG 82

TITLE: WATER RECLAMATION AND AUTOMATED WATER QUALITY MONITORING.

PERSONAL AUTHOR: JEFFERS, E. L.; AND OTHERS

DESCRIPTOR: *AUTOMATED MONITORING; *CALIFORNIA; *COSTS; *MONITORING; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *RECLAMATION; *WATER RECLAMATION; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: PB82-227497

ABSTRACT: THIS PROJECT INVOLVED USING AN AUTOMATED WATER MONITORING SYSTEM TO COLLECT DATA ON A WATER RECLAMATION PROCESS TRAIN IN NORTHERN CALIFORNIA. THE MONITORING SYSTEM AUTOMATICALLY MEASURES 14 WATER QUALITY PARAMETERS IN ADDITION TO 9 TRACE HALOCARBONS. SOME OF THE RESULTS, ESPECIALLY THE WATER TREATMENT PROCESSES, MAY BE UNIQUE TO THIS FACILITY AND SHOULD BE INTERPRETED CAUTIOUSLY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008963

PUBLICATION DATE: AUG 82

TITLE: DETERMINANTS AND OPTIONS FOR WATER DISTRIBUTION SYSTEM MANAGEMENT: A COST EVALUATION.

PERSONAL AUTHOR: CLARK, ROBERT M.; AND OTHERS

DESCRIPTOR: *COST STUDIES; *COSTS; *ECONOMICS; *MANAGEMENT; *MAINTENANCE; *PIPE REPLACEMENT; *RESEARCH REPORTS; *WATER DISTRIBUTION; *WATER SUPPLY; *WATER QUALITY

DESCRIPTIVE NOTE: PB82-227745

ABSTRACT: THIS REPORT DEALS WITH THE PROBLEMS ASSOCIATED WITH MAINTAINING AND REPLACING WATER SUPPLY DISTRIBUTION SYSTEMS. SOME OF THESE PROBLEMS ARE ASSOCIATED WITH PUBLIC HEALTH, ECONOMIC AND SPATIAL DEVELOPMENT OF THE COMMUNITY, AND COSTS OF REPAIR AND REPLACEMENT OF SYSTEM COMPONENTS. DATA INDICATE ESTABLISHING A TIMELY MAINTENANCE AND REPLACEMENT PROGRAM IS EXTREMELY IMPORTANT FROM AN ECONOMIC AND PUBLIC HEALTH VIEWPOINT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008964

PUBLICATION DATE: SEP 82

TITLE: COLLECTION AND TREATMENT OF WASTEWATER GENERATED BY PESTICIDE APPLICATORS.

PERSONAL AUTHOR: WHITTAKER, KENNETH F.; AND OTHERS

DESCRIPTOR: *COSTS; *DESIGN; *FACILITIES; *PESTICIDES; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-255365

ABSTRACT: A RESEARCH PROJECT WAS CONDUCTED TO DEVELOP A SYSTEM FOR THE CONTROL OF PESTICIDE-CONTAMINATED WASTEWATERS GENERATED BY PESTICIDE APPLICATORS. A TREATMENT PLANT WAS DEVELOPED TO REMOVE PESTICIDES FROM CONTAMINATED WASTEWATERS AND TO PRODUCE HIGH-QUALITY EFFLUENTS. THIS LOW-COST, LOW TECHNOLOGY SYSTEM SEEMS PARTICULARLY APPROPRIATE FOR SMALL-SCALE FIELD OPERATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008966

PUBLICATION DATE: FEB 82

TITLE: ORGANIC AND ORGANOTIN COMPOUNDS LEACHED FROM PVC AND CPVC PIPE.

PERSONAL AUTHOR: BOETTNER, EDWARD A.; AND OTHERS

DESCRIPTOR: *CONTAMINATION; *DRINKING WATER; *CPVC PIPES; *LEACHING; *TIN COMPOUNDS; *PVC PIPES; *PIPES; *RESEARCH REPORTS; *WATER PIPES; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: PB82-108333

ABSTRACT: THE PRIMARY OBJECTIVE OF THIS RESEARCH PROGRAM WAS TO DETERMINE WHETHER ORGANIC FORMS OF TIN EXISTED IN POTABLE WATER SAMPLES AFTER CONTACT WITH EITHER POLYVINYL CHLORIDE (PVC) OR CHLORINATED POLYVINYL CHLORIDE (CPVC) PIPE. THE RESULTS SHOWED THAT ALKYLTIN SPECIES WERE EXTRACTED FROM THE TESTED PIPES BY WATER; AMOUNTS VARIED DEPENDING ON CONDITIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008967

PUBLICATION DATE: DEC 81

TITLE: TREATABILITY STUDIES OF PESTICIDE MANUFACTURING WASTEWATERS. FIVE VOLUMES.

PERSONAL AUTHOR: ZWEIDINGER, R.; AND OTHERS

DESCRIPTOR: *INDUSTRY; *INDUSTRIAL WASTES; *ONSITE TREATMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *PESTICIDES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: CARBARYL - PB80-224306, DAZOMET - PB81-129033, DINOSEB AND ATRAZINE - PB81-178840, GLYPHOSATE - PB81-159097, ETHYLENEBISDITHIOCARBAMATE FUNGICIDES - PB82-107566

ABSTRACT: LABORATORY AND PILOT STUDIES WERE CONDUCTED TO DETERMINE THE TREATABILITY OF PESTICIDE MANUFACTURING WASTEWATERS. BOTH ONSITE AND PUBLICLY OWNED TREATMENT WORKS WERE CONSIDERED. LESS COSTLY, MORE AVAILABLE TREATMENTS WERE INVESTIGATED FIRST. INCLUDED IN THE STUDIES WERE CARBARYL, DINOSEB, ATRAZINE, DAZOMET, GLYPHOSATE, AND A FUNGICIDE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008968

PUBLICATION DATE: JUN 81

TITLE: EFFECTIVENESS OF ACTIVATED CARBON FOR REMOVAL OF TOXIC AND/OR CARCINOGENIC COMPOUNDS FROM WATER SUPPLIES.

PERSONAL AUTHOR: WEBER, WALTER J., JR.; PIRBAZARI, MASSOUD

DESCRIPTOR: *ACTIVATED CARBON; *CARCINOGENS; *DRINKING WATER; *HUMIC SUBSTANCES; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *TOXIC SUBSTANCES; *WATER

TREATMENT

DESCRIPTIVE NOTE: PB81-187197

ABSTRACT: THIS RESEARCH INVESTIGATED THE DYNAMIC PERFORMANCE OF FIXED-BED GRANULAR ACTIVATED CARBON PROCESSES FOR TREATING PUBLIC WATER SUPPLIES. THE ABSORPTION OF REPRESENTATIVE TOXIC AND/OR CARCINOGENIC TRACE COMPOUNDS OF MAN-RELATED ORIGIN WAS EVALUATED. ABSORPTION OF HUMIC SUBSTANCES WAS ALSO STUDIED. RESULTS OF THE RESEARCH AND CONCLUSIONS ARE REPORTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008969

PUBLICATION DATE: OCT 81

TITLE: SURVEY AND EVALUATION OF FINE BUBBLE DOME DIFFUSER AERATION EQUIPMENT.

PERSONAL AUTHOR: HOUCK, D. H.; BOON, A. G.

DESCRIPTOR: *ACTIVATED SLUDGE; *AERATION; *BUBBLE DOME DIFFUSERS; *DESIGN; *EQUIPMENT; *MAINTENANCE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SURVEYS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-105578

ABSTRACT: THIS RESEARCH PROJECT WAS INITIATED WITH THE OVERALL OBJECTIVE OF BETTER DEFINING THE OXYGEN TRANSFER PERFORMANCE, OPERATION AND MAINTENANCE REQUIREMENTS, AND PROPER DESIGN APPROACHES FOR FINE BUBBLE DOME DIFFUSER AERATION SYSTEMS USED IN ACTIVATED SLUDGE WASTEWATER TREATMENT. THE RESEARCH INCLUDED A SURVEY OF 19 WASTEWATER TREATMENT PLANTS WITH APPROPRIATE EQUIPMENT AND A REVIEW OF RELATED LITERATURE. ALTHOUGH THIS SURVEY CLEARLY SHOWS THE NEED FOR OPTIMIZED DESIGN AND OPERATING CONTROL STRATEGIES TO REALIZE THE FULL ENERGY SAVING POTENTIAL OF THIS TYPE OF EQUIPMENT, DOME DIFFUSER FINE BUBBLE AERATION SYSTEMS WERE PROVIDING RELATIVELY EFFICIENT, LOW MAINTENANCE SERVICE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008970

PUBLICATION DATE: DEC 81

TITLE: FULL-SCALE DEMONSTRATION OF INDUSTRIAL WASTEWATER TREATMENT UTILIZING DU PONT'S PACT PROCESS.

PERSONAL AUTHOR: HEATH, HARRY W., JR.

DESCRIPTOR: *COSTS; *DUPONT PACT PROCESS; *FACILITIES; *INDUSTRY; *INDUSTRIAL WASTEWATER; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB81-248122

ABSTRACT: OPERATING AND COST DATA ON STARTUP AND THE INITIAL 30 MONTHS OF OPERATION OF A 40-MGD INDUSTRIAL WASTEWATER TREATMENT PLANT USING DU PONT'S PACT PROCESS ARE REPORTED. THE PACT PROCESS EFFECTIVELY PROVIDES BOTH SECONDARY AND TERTIARY TREATMENT BY ADDING POWDERED ACTIVATED CARBON TO THE AERATOR IN AN ACTIVATED SLUDGE PROCESS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008972

PUBLICATION DATE: DEC 81

TITLE: INFILTRATION LAND TREATMENT OF STABILIZATION POND EFFLUENT.

PERSONAL AUTHOR: DORNBUSH, JAMES N.

DESCRIPTOR: *EFFLUENT; *INFILTRATION; *LAND TREATMENT; *PERFORMANCE EVALUATION; *PROJECT SUMMARIES; *STABILIZATION PONDS; *SOUTH DAKOTA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-109919

ABSTRACT: A RAPID INFILTRATION PILOT WASTEWATER TREATMENT SYSTEM CONSISTING OF THREE 0.07 HECTARE BASINS WAS OPERATED FOR FOUR SEASONS AT BROOKINGS, SOUTH DAKOTA. THE OBJECTIVES OF THE STUDY WERE TO DEMONSTRATE THAT RAPID INFILTRATION LAND TREATMENT COULD UPGRADE STABILIZATION POND EFFLUENT TO MEET STRINGENT EFFLUENT REQUIREMENTS AND TO IDENTIFY WINTER OPERATING CONSTRAINTS FOR THE SYSTEM. CONCLUSIONS AND RECOMMENDATIONS ARE REPORTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008974

PUBLICATION DATE: DEC 81

TITLE: PERFORMANCE OF TRICKLING FILTER PLANTS: RELIABILITY, STABILITY AND VARIABILITY.

PERSONAL AUTHOR: HAUGH, RICHARD; AND OTHERS

DESCRIPTOR: *DESIGN; *EFFLUENTS; *FILTRATION; *FACILITIES; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *TRICKLING FILTERS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-108143

ABSTRACT: EXAMINED WAS THE EFFLUENT QUALITY VARIABILITY FROM TRICKLING FILTERS OF 11 TREATMENT PLANTS. MULTIPLE REGRESSION ANALYSIS WAS USED TO DETERMINE THE EFFECTS OF VARIOUS PROCESS PARAMETERS ON EFFLUENT QUALITY. IN GENERAL, PRIMARY EFFLUENT BOD5, SUSPENDED SOLIDS CONCENTRATIONS, AND

WASTEWATER TEMPERATURE HAD THE GREATEST EFFECT. METHODS FOR INCORPORATING STATISTICAL CONCEPTS INTO TRICKLING FILTER DESIGN AND OPERATION ARE DISCUSSED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008976

PUBLICATION DATE: DEC 81

TITLE: PHYSICAL AND CHEMICAL CHARACTERISTICS OF SYNTHETIC ASPHALT PRODUCED FROM LIQUEFACTION OF SEWAGE SLUDGE.

PERSONAL AUTHOR: DONOVAN, J. M.; AND OTHERS

DESCRIPTOR: *ALTERNATIVE TECHNOLOGIES; ASPHALT; COSTS; ECONOMICS; ENERGY; PLANNING; OIL; *RECYCLING; *PROCESS DESIGN; SLUDGE; *SLUDGE DISPOSAL; *THERMOCHEMICAL LIQUEFACTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-119082

ABSTRACT: DIRECT THERMOCHEMICAL LIQUEFACTION OF PRIMARY UNDIGESTED MUNICIPAL SEWAGE SLUDGE WAS CARRIED OUT TO PRODUCE A LOW MOLECULAR WEIGHT STEAM-VOLATILE OIL, A HIGH MOLECULAR WEIGHT SYNTHETIC ASPHALT, AND A RESIDUAL CHAR CAKE. THE OVERALL FEASIBILITY OF THE PROCESS DEPENDS ON THE VALUE OF THE OIL AND SYNTHETIC ASPHALT PRODUCTS AS PETROLEUM REPLACEMENTS AND ON THE COSTS ASSOCIATED WITH DISPOSAL OF SLUDGE. PROJECTED ECONOMICS INDICATE THE PROCESS HAS CONSIDERABLE PROMISE FOR MANY POTENTIAL SITES IN THE UNITED STATES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008977

PUBLICATION DATE: SEP 82

TITLE: NONVOLATILE ORGANICS IN DISINFECTED WASTEWATER EFFLUENTS: CHEMICAL CHARACTERIZATION AND MUTAGENICITY.

PERSONAL AUTHOR: JOLLEY, R. L.; AND OTHERS

DESCRIPTOR: *CHLORINE; *DISINFECTION; *EFFLUENTS; *OZONE; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *ULTRAVIOLET LIGHT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-254053

ABSTRACT: THE OVERALL OBJECTIVES OF THIS RESEARCH WERE TO EXAMINE THE EFFECTS OF 3 DISINFECTANTS ON THE CHEMICAL COMPOSITION AND MUTAGENIC ACTIVITY OF WASTEWATER EFFLUENTS. THE DISINFECTANTS STUDIED WERE CHLORINE, OZONE, AND ULTRAVIOLET LIGHT. NINE DIFFERENT TREATMENT PLANT EFFLUENTS WERE EXAMINED BEFORE AND AFTER DISINFECTION. RESULTS OF THE STUDY ARE REPORTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008978

PUBLICATION DATE: OCT 82

TITLE: NINETEENTH CENTURY TECHNOLOGY--TWENTIETH CENTURY PROBLEMS: A RETROSPECTIVE MINI-ASSESSMENT.

PERSONAL AUTHOR: COATES, VARY T.; AND OTHERS

DESCRIPTOR: *ARSENIC; *ASSESSMENT; *COAL; *DAMS; *ENVIRONMENTAL PROBLEMS; *ENVIRONMENTAL IMPACTS; *INDUSTRIES; *HEAVY METALS; *PLANNING; *PUBLIC HEALTH; *SAFETY; *STEEL; *TECHNOLOGY

DESCRIPTIVE NOTE: PB82-242058

ABSTRACT: THIS RETROSPECTIVE ASSESSMENT OF 19TH CENTURY TECHNOLOGY HAS IDENTIFIED INDUSTRIAL AND URBAN TECHNOLOGIES WHICH MAY BE THE SOURCES OF PRESENT-DAY ENVIRONMENTAL PROBLEMS OR THREATS TO PUBLIC HEALTH AND SAFETY. FOUR CASE STUDIES RECEIVED PARTICULAR ATTENTION: (1) ARSENIC; (2) COAL; (3) IRON AND STEEL; AND (4) OLD DAMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008979

PUBLICATION DATE: OCT 81

TITLE: DESIGN OPTIMIZATION OF THE CHLORINATION PROCESS: VOLUME I. COMPARISON OF OPTIMIZED PILOT SYSTEM WITH EXISTING FULL-SCALE SYSTEMS.

PERSONAL AUTHOR: SEPP, ENDEL; BAO, PAUL

DESCRIPTOR: *CHLORINATION; *DESIGN; *DISINFECTION; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-100835

ABSTRACT: PARALLEL WASTEWATER EFFLUENT CHLORINATION STUDIES WERE DONE ON A MOBILE OPTIMIZED CHLORINATION PILOT SYSTEM AND THE FULL-SCALE SYSTEM AT EIGHT DIFFERENT TREATMENT PLANTS. DISINFECTION EFFICIENCY WAS MEASURED BY TOTAL COLIFORM COUNT AND CHLORINE RESIDUAL TESTS. AT SEVEN OF THE PLANTS WHERE COMPARATIVE STUDIES WERE MADE THE OPTIMIZED PILOT SYSTEM USED SIGNIFICANTLY LESS CHLORINE THAN THE EXISTING FULL-SCALE SYSTEMS. DESIGN VARIABLES OF THE SYSTEMS ARE DISCUSSED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008980

PUBLICATION DATE: AUG 82

TITLE: REMOVAL OF VIRUS FROM PUBLIC WATER SUPPLIES.

PERSONAL AUTHOR: O'CONNOR, J. T.; AND OTHERS

DESCRIPTOR: *DRINKING WATER; *CHLORINE; *CHLORAMINE; *CHLORINE DIOXIDE; *LIME; *MISSOURI; *OZONE; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *VIRUSES; *WATER TREATMENT

DESCRIPTIVE NOTE: PB82-230327

ABSTRACT: DISINFECTION STUDIES WERE DONE TO REMOVE VIRUSES FROM RAW MISSOURI RIVER WATER. OZONE AND CHLORINE DIOXIDE SHOWED POTENTIAL FOR INACTIVATING VIRUSES FOUND WHEN SUFFICIENT DOSAGE AND TIME WERE PROVIDED. CHLORINE AND CHLORAMINE APPEARED TO BE MARGINALLY EFFECTIVE WHEN APPLIED TO RAW RIVER WATER. FINISHED WATER SAMPLED AT LEXINGTON, MISSOURI YIELDED NO VIRUSES; PRELIMINARY TREATMENT WITH LIME HAD A SIGNIFICANT EFFECT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008984

PUBLICATION DATE: SEP 82

TITLE: RIVER BASIN VALIDATION OF THE WATER QUALITY ASSESSMENT METHODOLOGY FOR SCREENING NONDESIGNATED 208 AREAS: VOLUMES I AND II.

PERSONAL AUTHOR: DAVIS, MICHAEL J.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ASSESSMENT; *MODELS; *NUTRIENT LOADS; *WATER QUALITY; *WATERSHEDS

DESCRIPTIVE NOTE: VOLUME I. NONPOINT SOURCE LOAD ESTIMATION, PB82-260837; VOLUME II. CHESPEAKE-SANDUSKY NONDESIGNATED 208 SCREENING METHODOLOGY DEMONSTRATION, PB82-260845

ABSTRACT: TECHNIQUES FOR ESTIMATING DIFFUSE NUTRIENT LOADS AND THEIR WATER QUALITY EFFECTS THROUGHOUT LARGE WATERSHEDS WERE TESTED UNDER VARIOUS FIELD SITUATIONS FOR A WIDE RANGE OF CONDITIONS. THE LOADING METHODS AND THE WATER QUALITY METHODS TESTED IN THIS STUDY WERE HIGHLY COMPATIBLE AND GAVE REASONABLY ACCURATE PREDICTIONS OF INSTREAM, LAKE, AND ESTUARY WATER QUALITY CONSTITUENT CONCENTRATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008985

PUBLICATION DATE: SEP 82

TITLE: METHOD DEVELOPMENT FOR DETERMINATION OF POLYCHLORINATED HYDROCARBONS IN MUNICIPAL SLUDGE.

PERSONAL AUTHOR: RODRIGQUEZ, CHARLES F.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *LABORATORY PROCEDURES; *PESTICIDES; *POLYCHLORINATED HYDROCARBONS; *SEWAGE; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PB82-234071

ABSTRACT: THIS REPORT DESCRIBES THE WORK PERFORMED AND THE CONCLUSIONS OBTAINED FROM A STUDY ON THE DEVELOPMENT OF A METHOD FOR ANALYSIS OF MUNICIPAL SEWAGE SLUDGE FOR CHLORINATED PESTICIDES AND BIPHENYLS. THE METHODOLOGY DEVELOPED WAS DETERMINED TO BE SUCCESSFUL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008986

PUBLICATION DATE: AUG 82

TITLE: SHORT-TERM SCREENING TEST FOR QUICK RESPONSES TO POLLUTANTS WHERE HEALTH EFFECTS DATA ARE LACKING.

PERSONAL AUTHOR: DRUMMOND, JOHN G.; AND OTHERS

DESCRIPTOR: *AEROSOLS; *ASSESSMENT; *HEALTH EFFECTS; *POLLUTANTS; *RESEARCH REPORTS; *SULFATES

DESCRIPTIVE NOTE: PB82-234303

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW008990

PUBLICATION DATE: DEC 81

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS): A COMPILATION OF ABSTRACTS TO WATER QUALITY AND WATER RESOURCES MATERIALS. SUPPLEMENT VIII.

DESCRIPTOR: *AUDIOVISUAL AIDS; CITIZEN PARTICIPATION; ENVIRONMENTAL EDUCATION; INDEXES; INFORMATION DISSEMINATION; *INSTRUCTIONAL MATERIALS; PESTICIDES; POST SECONDARY EDUCATION; TECHNOLOGY; WASTE DISPOSAL; *WASTE WATER; WATER; WATER POLLUTION; *WATER QUALITY; *WATER RESOURCES; *WATER TREATMENT; *WASTEWATER TREATMENT

ABSTRACT: COMPILED ARE ABSTRACTS AND INDEXES TO SELECTED PRINT AND NON-PRINT MATERIALS; RELATED TO WASTEWATER TREATMENT AND WATER QUALITY EDUCATION AND INSTRUCTION, AS WELL AS MATERIALS RELATED TO PESTICIDES, HAZARDOUS WASTES, AND PUBLIC PARTICIPATION. SOURCES OF ABSTRACTED/INDEXED MATERIALS INCLUDE ALL LEVELS OF GOVERNMENT, PRIVATE CONCERNS, AND EDUCATIONAL INSTITUTIONS. TITLE, AUTHOR(S), PUBLICATION DATE, CROSS-REFERENCES, DESCRIPTORS, AND AVAILABILITY ARE PROVIDED FOR EACH ENTRY. ALSO INCLUDED ARE PROCEDURES TO ILLUSTRATE HOW INSTRUCTORS AND CURRICULUM DEVELOPERS IN THE WATER QUALITY CONTROL FIELD CAN LOCATE INSTRUCTIONAL MATERIALS TO MEET VERY GENERAL OR HIGHLY SPECIFIC REQUIREMENTS OF THEIR PROGRAMS. THIS PUBLICATION SUPPLEMENTS AND DOES NOT REPLACE "WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS): A COMPILATION OF ABSTRACTS TO WATER QUALITY AND WATER RESOURCES MATERIALS" OR IRIS SUPPLEMENTS I-VII.

AVAILABILITY: EPA INFORMATION DISSEMINATION PROJECT, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212 (SUBSCRIPTION $12.00, $4.00 EACH).

IRIS ACCESSION NUMBER: EW008991

PUBLICATION DATE: MAR 82

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS): A COMPILATION OF ABSTRACTS TO WATER QUALITY AND WATER RESOURCES MATERIALS. SUPPLEMENT IX.

DESCRIPTOR: *AUDIOVISUAL AIDS; CITIZEN PARTICIPATION; ENVIRONMENTAL EDUCATION; INDEXES; INFORMATION DISSEMINATION; *INSTRUCTIONAL MATERIALS; PESTICIDES; POST SECONDARY EDUCATION; TECHNOLOGY; WASTE DISPOSAL; *WASTE WATER; WATER; WATER POLLUTION; *WATER QUALITY; *WATER RESOURCES; *WATER TREATMENT; *WASTEWATER TREATMENT

ABSTRACT: COMPILED ARE ABSTRACTS AND INDEXES TO SELECTED PRINT AND NON-PRINT MATERIALS RELATED TO WASTEWATER TREATMENT AND WATER QUALITY EDUCATION AND INSTRUCTION, AS WELL AS MATERIALS RELATED TO PESTICIDES, HAZARDOUS WASTES, AND PUBLIC PARTICIPATION. SOURCES OF ABSTRACTED/INDEXED MATERIALS INCLUDE ALL LEVELS OF GOVERNMENT, PRIVATE CONCERNS, AND EDUCATIONAL INSTITUTIONS. TITLE, AUTHOR(S), PUBLICATION DATE, CROSS-REFERENCES, DESCRIPTORS, AND AVAILABILITY ARE PROVIDED FOR EACH ENTRY. ALSO INCLUDED ARE PROCEDURES TO ILLUSTRATE HOW INSTRUCTORS AND CURRICULUM DEVELOPERS IN THE WATER QUALITY CONTROL FIELD CAN LOCATE INSTRUCTIONAL MATERIALS TO MEET VERY GENERAL OR HIGHLY SPECIFIC REQUIREMENTS OF THEIR PROGRAMS. THIS PUBLICATION SUPPLEMENTS AND DOES NOT REPLACE "WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS): A COMPILATION OF ABSTRACTS TO WATER QUALITY AND WATER RESOURCES MATERIALS" OR IRIS SUPPLEMENTS I-VIII.

AVAILABILITY: EPA INFORMATION DISSEMINATION PROJECT, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212 (SUBSCRIPTION $12.00, $4.00 EACH).

IRIS ACCESSION NUMBER: EW008992

PUBLICATION DATE: JUN 82

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS): A COMPILATION OF ABSTRACTS TO WATER QUALITY 8 WATER RESOURCES MATERIALS. SUPPLEMENT X.

DESCRIPTOR: *AUDIOVISUAL AIDS; CITIZEN PARTICIPATION; ENVIRONMENTAL EDUCATION; INDEXES; INFORMATION DISSEMINATION; *INSTRUCTIONAL MATERIALS; PESTICIDES; POST SECONDARY EDUCATION; TECHNOLOGY; WASTE DISPOSAL; *WASTE WATER; WATER; WATER POLLUTION; *WATER QUALITY; *WATER RESOURCES; *WATER TREATMENT; HAZARDOUS MATERIALS; *WASTEWATER TREATMENT

ABSTRACT: COMPILED ARE ABSTRACTS AND INDEXES TO SELECTED PRINT AND NON-PRINT MATERIALS RELATED TO WASTEWATER TREATMENT AND WATER QUALITY EDUCATION AND INSTRUCTION, AS WELL AS MATERIALS RELATED TO PESTICIDES, HAZARDOUS WASTES, AND PUBLIC PARTICIPATION. SOURCES OF ABSTRACTED/INDEXED MATERIALS INCLUDE ALL LEVELS OF GOVERNMENT, PRIVATE CONCERNS, AND EDUCATIONAL INSTITUTIONS. TITLE, AUTHOR(S), PUBLICATION DATE, CROSS-REFERENCES, DESCRIPTORS, AND AVAILABILITY ARE PROVIDED FOR EACH ENTRY. ALSO INCLUDED ARE PROCEDURES TO ILLUSTRATE HOW INSTRUCTORS AND CURRICULUM DEVELOPERS IN THE WATER QUALITY CONTROL FIELD CAN LOCATE INSTRUCTIONAL MATERIALS TO MEET VERY GENERAL OR HIGHLY SPECIFIC REQUIREMENTS OF THEIR PROGRAMS. THIS PUBLICATION SUPPLEMENTS AND DOES NOT REPLACE "WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS): A COMPILATION OF ABSTRACTS TO WATER QUALITY AND WATER RESOURCES" OR IRIS SUPPLEMENTS 1-9.

AVAILABILITY: EPA INFORMATION DISSEMINATION PROJECT, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212 (SUBSCRIPTION $12.00, $4.00 EACH).

IRIS ACCESSION NUMBER: EW008993

PUBLICATION DATE: AUG 81

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES MONOGRAPH SERIES: ANAEROBIC DIGESTION.

PERSONAL AUTHOR: TOWNSEND, ROBERT D.

DESCRIPTOR: *JOB SKILLS; *JOB TRAINING; POST SECONDARY EDUCATION; QUALITY CONTROL; TECHNICAL EDUCATION; *WASTE DISPOSAL; WATER POLLUTION; *WASTEWATER TREATMENT; *OPERATIONS (WASTEWATER); *ANAEROBIC DIGESTION

DESCRIPTIVE NOTE: 205P. PRICE: $5.50

ABSTRACT: FOCUSING SPECIFICALLY ON THE WASTEWATER TREATMENT PROCESS OF ANAEROBIC DIGESTION, THIS DOCUMENT IDENTIFIES INSTRUCTIONAL AND REFERENCE MATERIALS FOR USE BY PROFESSIONALS IN THE FIELD IN THE DEVELOPMENT AND IMPLEMENTATION OF NEW PROGRAMS OR IN THE UPDATING OF EXISTING PROGRAMS. IT IS DESIGNED TO HELP TRAINERS, PLANT OPERATORS, EDUCATORS, ENGINEERS, CONSULTANTS, AND STUDENTS EFFICIENTLY IDENTIFY AND LOCATE SPECIFIC INSTRUCTIONAL MATERIALS. PART I PRESENTS A BRIEF DESCRIPTION OF THE ANAEROBIC DIGESTION PROCESS IN WASTEWATER TREATMENT OPERATIONS. PART II PROVIDES ELEVEN SELECTED CHAPTERS OR SECTIONS FROM RESOURCE PUBLICATIONS AND OTHER INSTRUCTIONAL MATERIALS WHICH ARE REPRESENTATIVE OF MATERIALS CURRENTLY AVAILABLE. PART III CONTAINS ABSTRACTS OF OTHER PERTINENT

INSTRUCTIONAL MATERIALS WHICH MAY SUPPLEMENT THOSE IN PART II. THE FINAL SECTION ALPHABETICALLY LISTS BIBLIOGRAPHIC CITATIONS, MOSTLY FROM TECHNICAL AND SCIENTIFIC JOURNALS, OF ADDITIONAL RESOURCES WHICH TEND TO BE HIGHLY SPECIFIC AND MORE TECHNICAL IN NATURE. (ED 215 900)

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW008994

PUBLICATION DATE: DEC 81

TITLE: WATER QUALITY INSTRUCTIONAL RESOURCES MONOGRAPH SERIES: IMPROVING INSTRUCTION.

PERSONAL AUTHOR: COON, HERBERT L.

DESCRIPTOR: ADULT LEARNING; ADULT STUDENTS; INSTRUCTIONAL DESIGN; *INSTRUCTIONAL DEVELOPMENT; *INSTRUCTIONAL IMPROVEMENT; INSTRUCTIONAL MATERIALS; *LESSON PLANS; POST SECONDARY EDUCATION; *STUDENT CHARACTERISTICS; TEACHER IMPROVEMENT; *TEACHING METHODS; WASTE WATER; *WATER QUALITY; WATER TREATMENT; *WASTEWATER TREATMENT; *OPERATIONS (WASTEWATER)

DESCRIPTIVE NOTE: 207P. PRICE: 5.50

ABSTRACT: A GREAT VARIETY AND AMOUNT OF TEACHING MATERIALS AND METHODS RELATED TO WATER QUALITY AND OTHER ENVIRONMENTAL PROTECTION AGENCY (EPA) CONCERNS HAVE BEEN DEVELOPED. PROGRAM DEVELOPERS/TRAINERS RESPONSIBLE FOR INSTRUCTIONAL PROGRAMS WILL FIND IN ERIC AND THE INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS) ENOUGH MATERIAL TO ORGANIZE DOZENS OF SHORT COURSES AND/OR HUNDREDS OF INSTRUCTIONAL HOURS. THE PROBLEM IS NOT LACK OF MATERIAL BUT RATHER SELECTING AND/OR DEVELOPING MATERIAL THAT IS MOST USEFUL IN A SPECIFIC SITUATION, ACHIEVES CERTAIN OBJECTIVES, HONORS THE NEEDS AND CONCERNS OF ADULT LEARNERS, AND PERMITS INSTRUCTORS TO USE MATERIALS/METHODS WHICH CAPITALIZE ON THEIR TEACHING STRENGTHS. CITED IN THIS DOCUMENT ARE IDEAS, MATERIALS, AND METHODS THAT MAY BE USEFUL TO PERSONS INVOLVED IN DESIGNING INSTRUCTIONAL PROGRAMS FOR WATER QUALITY OR OTHER EPA CONCERNS. THE FIRST SECTION PROVIDES CHARACTERISTICS OF ADULT LEARNERS WITH RELATED TEACHING IMPLICATIONS. THE SECOND SECTION FOCUSES ON TEACHERS OF ADULTS. THE THIRD SECTION (THE MAJOR PART OF THE DOCUMENT) FOCUSES ON VARIOUS ASPECTS OF INSTRUCTIONAL PLANNING AND TEACHING, INCLUDING SAMPLE LESSONS FOUND IN THE ERIC AND IRIS LITERATURE. REFERENCE MATERIALS (WITH ABSTRACT AND AVAILABILITY) ARE PROVIDED IN THE FIFTH SECTION. EPA INSTRUCTIONAL RESOURCES CENTER (IRC) ACTIVITIES ARE DESCRIBED IN THE FINAL SECTION.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW009011

PUBLICATION DATE: MAR 83

TITLE: THE ANAEROBIC APPROACH: A BETTER ANSWER.

PERSONAL AUTHOR: HARVEY, LEANNE M.; RUBIANO, JUILO C.

DESCRIPTOR: *ANAEROBIC TREATMENT; *FACILITIES; *INDUSTRIAL WASTES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 22-25P.

ABSTRACT: DESCRIBED IS THE USE OF AN ANAEROBIC WASTEWATER TREATMENT PROCESS FOR HIGH-STRENGTH INDUSTRIAL WASTEWATERS. THE PROCESS HAS INCREASED PLANT CAPACITY AND RELIABILITY.

AVAILABILITY: INDUSTRIAL WASTE; V29 N2

IRIS ACCESSION NUMBER: EW009024

TITLE: EVALUATION OF CARTRIDGE FILTERS FOR THE REMOVAL OF GIARDIA LAMBLIA CYST MODELS FROM DRINKING WATER SYSTEMS.

PERSONAL AUTHOR: LONG, WILLIAM R.

DESCRIPTOR: *CARTRIDGE FILTERS; *DISEASES; *DRINKING WATER; *FILTRATION; *PERFORMANCE EVALUATION; *PUBLIC HEALTH; *WATER QUALITY; *WATER TREATMENT

ABSTRACT: NUMEROUS OUTBREAKS OF GIARDIASIS HAVE OCCURRED IN RECENT YEARS IN MANY AREAS OF THE UNITED STATES. SINCE GIARDIA LAMBLIA CYSTS ARE RESISTANT TO CHLORINATION, REMOVING CYSTS BY FILTRATION WOULD BE A SOLUTION TO WATER TREATMENT. CARTRIDGE FILTERS WERE ANALYZED FOR FILTER EFFICIENCY BY THE USE OF TURBIDITY MEASUREMENTS, PARTICLE SIZE ANALYSIS, AND SCANNING ELECTRON MICROSCOPY ANALYSIS. RESULTS ARE REPORTED.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH; V45 N5 P220-225, MAR 83

IRIS ACCESSION NUMBER: EW009025

TITLE: ROUTINE COLIFORM MONITORING AND WATERBORNE DISEASE OUTBREAKS.

PERSONAL AUTHOR: BATIK, ODETTE; AND OTHERS

DESCRIPTOR: *COLIFORMS; *DRINKING WATER; *DISEASES; *MONITORING; *PUBLIC HEALTH; *RESEARCH REPORTS; *WATER TREATMENT

ABSTRACT: A COMPARISON OF COLIFORM MONITORING RESULTS IN A SAMPLE OF BOTH COMMUNITY AND NON-COMMUNITY WATER SYSTEMS SHOWED NO STATISTICAL DIFFERENCES IN COLIFORM RESULTS BETWEEN SYSTEMS IN WHICH AN OUTBREAK HAD OCCURRED AND SYSTEMS IN WHICH NO OUTBREAKS HAD BEEN REPORTED.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH; V45 N5 P227-230, MAR 83

IRIS ACCESSION NUMBER: EW009027

TITLE: SOME ADDITIVES TO SEPTIC TANK SYSTEMS MAY POISON GROUNDWATER.

PERSONAL AUTHOR: KAPIAN, O. B.

DESCRIPTOR: *ADDITIVES; *GROUNDWATER; *MAINTENANCE; *ONSITE [illegible] TREATMENT; *REGULATIONS; *SEPTIC TANKS; *TOXIC SUBSTANCES; *WASTEWATER TREATMENT; *WATER QUALITY

ABSTRACT: THE QUALITY OF GROUNDWATER MAY BE ENDANGERED BY SOME HAZARDOUS ORGANIC CHEMICALS WHICH ARE SOLD FOR THE TREATMENT AND PREVENTION OF SEPTIC SYSTEM FAILURES. THREE CATEGORIES OF ADDITIVES ARE DISCUSSED AND POTENTIAL HAZARDS OF SEVERAL ARE CONSIDERED. THE NEED FOR LOCAL OR STATE REGULATION IS STRESSED.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH; V45 N5 P259, MAY 83

IRIS ACCESSION NUMBER: EW009041

TITLE: THE HYDROGEOLOGY OF THE BURIED VALLEY AQUIFER SYSTEM.

DESCRIPTOR: *AQUIFERS; *BURIED VALLEY AQUIFER SYSTEM; *GROUNDWATER; *HYDROGEOLOGY; GEOLOGY; NATURAL RESOURCES; *NEW JERSEY; *RESEARCH; RESEARCH NEEDS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: PRICE: $15.00 PLUS $2.00 POSTAGE AND HANDLING.

ABSTRACT: THE HYDROGEOLOGY OF THE BURIED VALLEY AQUIFER SYSTEM IS A RELATIVELY NON-TECHNICAL GUIDE TO THE CHARACTERISTICS AND GROUND WATER RESOURCES OF THE BURIED VALLEY AQUIFER SYSTEM, A FEDERALLY-DESIGNATED, SOLE-SOURCE AQUIFER LOCATED IN NORTH-CENTRAL NEW JERSEY WITHIN THE CENTRAL PASSAIC RIVER BASIN. THE REPORT WAS PREPARED FOR USE BY MUNICIPAL OFFICIALS, PLANNERS, ENVIRONMENTAL MANAGERS, CONSULTANTS, CITIZENS, AND OTHERS WHO NEED A CONCISE YET UNDERSTANDABLE ANALYSIS OF CURRENT INFORMATION ON THE AQUIFER SYSTEM. THE REPORT CONTAINS SIX CHAPTERS AND FIVE APPENDICES. THE CHAPTERS INCLUDE: A DISCUSSION OF THE FEDERAL DESIGNATION AND THE ACTIVITIES OF THE PASSAIC VALLEY GROUND WATER PROTECTION COMMITTEE; THE GENERAL GEOLOGY OF THE STUDY AREA; AN OVERVIEW OF THE SCIENCE OF HYDROGEOLOGY, SUITABLE FOR NON-SPECIALISTS; THE DELINEATION AND CHARACTERISTICS OF THE AQUIFERS; ONGOING RESEARCH EFFORTS; AND FUTURE RESEARCH NEEDS.

AVAILABILITY: PASSAIC RIVER COALITION, 246 MADISONVILLE, ROAD, BASKING RIDGE, NJ 07920

IRIS ACCESSION NUMBER: EW009042

PUBLICATION DATE: 80

TITLE: THE APPLICATION OF SYSTEMS ANALYSIS TO PROBLEMS OF IRRIGATION, DRAINAGE AND FLOOD CONTROL: A MANUAL FOR WATER AND AGRICULTURAL ENG

DESCRIPTOR: DESIGN; *DRAINAGE; *ENGINEERING; *FLOOD CONTROL; *IRRIGATION; *PLANNING; *SYSTEMS ANALYSIS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 211P.

ABSTRACT: THIS MANUAL, DESIGNED PRIMARILY FOR USE BY ENGINEERS, DEALS WITH THE APPLICATION OF SYSTEMS ANALYSIS TECHNIQUES TO SOLVING PROBLEMS OF PLANNING, DESIGN AND OPERATION CONNECTED WITH IRRIGATION, DRAINAGE AND FLOOD CONTROL PROJECTS. THE MANUAL DESCRIBES THE GENERAL CONCEPTS OF SYSTEMS ANALYSIS, AND GIVES EXAMPLES OF THE APPLICATION OF SYSTEMS ANALYSIS TO SOLVING IRRIGATION PROBLEMS, SUCH AS UTILIZATION OF WATER RESOURCES FOR IRRIGATION, CALCULATION OF AN OPTIMUM IRRIGATION REGIME, AND EVALUATION OF WATER AND SALT REGIMES ON IRRIGATED LAND. NUMEROUS FIGURES AND TABLES AND AN EXTENSIVE BIBLIOGRAPHY ARE PROVIDED.

AVAILABILITY: PERGAMON PRESS, LTD., HEADINGTON HILL HALL, OXFORD OX3 OBW, ENGLAND

IRIS ACCESSION NUMBER: EW009043

PUBLICATION DATE: 80

TITLE: AQUATIC PESTS ON IRRIGATION SYSTEMS: IDENTIFICATION GUIDE, SECOND EDITION.

PERSONAL AUTHOR: OTTO, N. E.; AND OTHERS

DESCRIPTOR: *ANIMALS; *AQUATIC PESTS; *IDENTIFICATION GUIDES; *IRRIGATION; *PESTS; *PEST CONTROL; *PLANTS

DESCRIPTIVE NOTE: 96P.

ABSTRACT: THIS IS A SIMPLIFIED GUIDE FOR THE IDENTIFICATION OF ORGANISMS WHICH CAUSE PROBLEMS THROUGH EXTENSIVE INFESTATIONS ON IRRIGATION SYSTEMS. BECAUSE THE METHODS EMPLOYED TO CONTROL THESE PLANTS AND INVERTEBRATE AQUATIC ANIMALS DIFFER WIDELY DUE TO THE DIFFERENCES OF THE ORGANISMS THEMSELVES, CORRECT IDENTIFICATION IS NECESSARY IN ORDER TO IMPLEMENT THE STEPS REQUIRED TO CONTROL THESE PESTS OR PREVENT THEIR OCCURRENCE. THE BOOK CONSISTS OF ILLUSTRATIONS AND NARRATIVE DESCRIPTIONS OF SOME OF THE COMMONLY OBSERVED ORGANISMS THAT BECOME PESTS IN THE OPERATION OF IRRIGATION SYSTEMS IN THE WESTERN UNITED STATES. THE TEXTS ARE NOT INTENDED TO BE TAXONOMIC DESCRIPTIONS OF THE SPECIES DISCUSSED, BUT ARE PRIMARILY FOR USE BY FIELD PERSONNEL AND WATER USERS DIRECTLY CONCERNED WITH THE PROBLEMS. SUFFICIENT INFORMATION IS PROVIDED TO PERMIT A TENTATIVE IDENTIFICATION. THIS BOOKLET, WHICH WAS FIRST PUBLISHED IN 1965, IS A REVISED AND UPDATED EDITION.

AVAILABILITY: U.S. DEPARTMENT OF THE INTERIOR, WATER AND

POWER RESOURCES SERVICE, DENVER FEDERAL CENTER, DENVER, CO 80225

IRIS ACCESSION NUMBER: EW009044

PUBLICATION DATE: 82

TITLE: ALTERNATIVE WASTEWATER TREATMENT.

PERSONAL AUTHOR: EIKUM, ARILD S.; SEABLOOM, ROBERT W.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *CONFERENCE PROCEEDINGS; *EUROPE; *OPERATIONS (WASTEWATER); *ONSITE TREATMENT; *WASTEWATER TREATMENT; *UNITED STATES

DESCRIPTIVE NOTE: 350P. PRICE: $45.00

ABSTRACT: THIS VOLUME PRESENTS THE PROCEEDINGS FROM AN OSLO, NORWAY, SYMPOSIUM ON THE EXPERIENCES AND KNOWLEDGE GLEANED FROM THE FIRST YEARS OF OPERATION AT SMALL, LOW-COST WASTEWATER TREATMENT SYSTEMS IN THE U.S. AND SEVERAL NORTHERN EUROPEAN COUNTRIES. IT APPLIES SPECIFICALLY TO ON-SITE TREATMENT.

AVAILABILITY: KLUWER BOSTON, INC., 190 OLD DERBY STREET, HINGHAM, MA 02043

IRIS ACCESSION NUMBER: EW009045

PUBLICATION DATE: 82

TITLE: APPROPRIATE SANITATION ALTERNATIVES: WORLD BANK STUDIES IN WATER SUPPLY AND SANITATION.

PERSONAL AUTHOR: KABERMATTEN, JOHN M.; AND OTHERS

DESCRIPTOR: *APPROPRIATE TECHNOLOGY; *DEVELOPING COUNTRIES; *ECONOMICS; *ENVIRONMENT; *PUBLIC HEALTH; *SANITATION; *WASTE DISPOSAL; *WATER SUPPLY; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 115 VOL 1-160 V2P. PRICE: $12.95 VOL 1; $15.00 VOL 2

ABSTRACT: AS PART OF THE UNITED NATIONS' INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE PROJECT, THE WORLD BANK HAS ASSEMBLED IN TWO VOLUMES INFORMATION ON APPROPRIATE TECHNOLOGIES FOR WATER SUPPLY AND WASTE DISPOSAL SYSTEMS IN DEVELOPING COUNTRIES. VOLUME 1 EVALUATES THE TECHNICAL, ECONOMIC, ENVIRONMENTAL, HEALTH, AND SOCIOCULTURAL FINDINGS OF THE WORLD BANK'S RESEARCH PROGRAM IN A THEORETICAL FRAMEWORK. THE SECOND VOLUME IS AN UPDATED COMPENDIUM OF ACTUAL ENGINEERING DESIGNS AND RECOMMENDATIONS FOR WORK.

AVAILABILITY: THE JOHN HOPKINS UNIVERSITY PRESS, BALTIMORE, MD 21218

IRIS ACCESSION NUMBER: EW009046

TITLE: CHEMICAL HYDROGEOLOGY.

PERSONAL AUTHOR: BACK, W.; FREEZE, R. A.

DESCRIPTOR: CHEMISTRY; *CHEMICAL REACTIONS; *CONTAMINATION; *GROUNDWATER; *HYDROLOGY; *MANAGEMENT; *MODELS; *WATER SUPPLY; *WATER RESOURCES; *WATER POLLUTION

DESCRIPTIVE NOTE: 432P.

ABSTRACT: EXPLAINED IS THE SCIENTIFIC SIGNIFICANCE AND HISTORICAL PERSPECTIVE OF CHEMICAL PRINCIPLES AS APPLIED TO GROUNDWATER REGIMES. THE VOLUME PROVIDES AN UNDERSTANDING OF PROBLEMS SUCH AS MANAGEMENT OF RADIOACTIVE AND TOXIC WASTES, DEVELOPMENT OF WATER SUPPLIES, FORMATION OF ORE DEPOSITS, AND HYDROLOGIC EFFECTS OF MINING AND OIL PRODUCTION. CONTENTS INCLUDE: EQUILIBRIUM CHEMISTRY OF IRON IN GROUNDWATER; CARBONATE EQUILIBRIA AND RADIOCARBON DISTRIBUTION RELATED TO GROUNDWATER FLOW IN THE FLORIDAN LIMESTONE AQUIFER; ISOTOPES IN GROUNDWATER; TRACING SHALLOW GROUNDWATER SYSTEMS BY SOIL TEMPERATURE; AND USING MODELS TO SIMULATE THE MOVEMENTS OF CONTAMINANTS THROUGH GROUNDWATER FLOW SYSTEMS.

AVAILABILITY: SCIENTIFIC AND ACADEMIC EDITIONS, 35 WEST 50TH STREET, NEW YORK, NY 10020

IRIS ACCESSION NUMBER: EW009047

PUBLICATION DATE: 82

TITLE: THE CLEAN WATER ACT: THE SECOND DECADE.

PERSONAL AUTHOR: WARD, MORRIS A.

DESCRIPTOR: *CLEAN WATER ACT; *HISTORY; *LEGISLATION; *REGULATIONS; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 54P. PRICE: $11.95

ABSTRACT: THIS BOOK PRESENTS A SECTION-BY-SECTION ANALYSIS OF THE EXISTING WATER LAW AND ITS REGULATIONS IN LAYMAN'S LANGUAGE. IT ALSO GIVES A HISTORY OF U.S. WATER RESOURCES LEGISLATION AND A SUMMARY OF WATER RESOURCE AND QUALITY ISSUES THAT WILL BE INCREASINGLY DISCUSSED.

AVAILABILITY: E. BRUCE HARRISON CO., INC., SUITE 900, 605-14TH STREET, N.W., WASHINGTON, DC 20005

IRIS ACCESSION NUMBER: EW009048

PUBLICATION DATE: 82

TITLE: COMBATING OIL SPILLS: SOME ECONOMIC ASPECTS.

DESCRIPTOR: *CLEANUP; *COSTS; *ECONOMICS; *LIABILITY; *OCEANOGRAPHY; *POLLUTION; *OIL SPILLS; *STATISTICAL DATA; *WATER POLLUTION

DESCRIPTIVE NOTE: 140P. PRICE: $9.50

ABSTRACT: THIS WORK CONTAINS THE FIRST PUBLISHED STATISTICAL COLLECTION OF OIL SPILL COSTS. IT SHOWS THE INCREASE IN COSTS OF DAMAGE AND CLEANUP FROM 1962 TO 1980, IN TERMS OF RELATIVE AND ABSOLUTE COSTS. A DISCUSSION OF THE "POLLUTER PAYS" PRINCIPLE IS ALSO PRESENTED.

AVAILABILITY: OECD PUBLICATIONS AND INFORMATION CENTER, SUITE 1207, 1750 PENNSYLVANIA AVE., N.W., WASHINGTON, DC 20006

IRIS ACCESSION NUMBER: EW009049

PUBLICATION DATE: 83

TITLE: CONFERENCE PROCEEDINGS: PUMPING STATION DESIGN FOR THE PRACTICING ENGINEER.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *DESIGN; *PUMPS; *PUMPING STATIONS

DESCRIPTIVE NOTE: 1576P. PRICE: $150.00

ABSTRACT: VIRTUALLY EVERY PHASE OF PUMPING STATION DESIGN IS COVERED IN THIS 34-CHAPTER, 4-VOLUME REVIEW THAT INVOLVED NEARLY 100 PROFESSIONAL ENGINEERS IN ITS PREPARATION.

AVAILABILITY: DEPARTMENT OF CIVIL ENGINEERING MECHANICS, MONTANA STATE UNIVERSITY, BOZEMAN, MT 59717

IRIS ACCESSION NUMBER: EW009050

PUBLICATION DATE: 82

TITLE: THE COST OF OIL SPILLS.

DESCRIPTOR: *COMPENSATION; *ECONOMICS; *OCEANOGRAPHY; *OIL SPILLS; *POLLUTION; *WATER POLLUTION

DESCRIPTIVE NOTE: 252P. PRICE: $15.00

ABSTRACT: INCLUDED ARE STUDIES PRESENTED AT AN OECD SEMINAR. THE VARIOUS FORMS OF DAMAGE, BOTH ECONOMIC LOSSES AND IMPAIRMENTS OF WELL-BEING ARE CONSIDERED. THE STUDIES ARE BASED LARGELY ON RESEARCH FOLLOWING THE AMOCO CADIZ DISASTER. THEY SHOW, IN PARTICULAR, THE DIFFICULTIES ENCOUNTERED BY OIL SPILL VICTIMS IN ESTABLISHING HOW MUCH COMPENSATION THEY SHOULD CLAIM.

AVAILABILITY: OECD PUBLICATIONS AND INFORMATION CENTER, SUITE 1207, 1750 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC 20006

IRIS ACCESSION NUMBER: EW009051

PUBLICATION DATE: 82

TITLE: DATA PROCESSING IN THE WATER INDUSTRY.

DESCRIPTOR: *AUTOMATION; *CONFERENCE PROCEEDINGS; *DATA AUTOMATION; *OPERATION (WATER); *OPERATIONS (WASTEWATER); *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 92P.

ABSTRACT: THESE PROCEEDINGS FROM A SYMPOSIUM HELD BY THE INSTITUTE IN 1982 AT BOURNEMOUTH PRESENT A GENERAL OVERVIEW OF ADVANCES IN DATA AUTOMATION TECHNOLOGY AS IT APPLIES TO WATER AND WASTEWATER TREATMENT SYSTEMS.

AVAILABILITY: INSTITUTE OF WATER POLLUTION CONTROL, LEDSON HOUSE, 53 LONDON ROAD, MAIDSTONE, KENT ME168JH, ENGLAND

IRIS ACCESSION NUMBER: EW009052

PUBLICATION DATE: 82

TITLE: DATA SHEETS ON SELECTED TOXIC ELEMENTS.

PERSONAL AUTHOR: JAWORSKI, J. F.

DESCRIPTOR: *ANIMALS; *BIOLOGICAL EFFECTS; *CHEMICALS; *DATA SHEETS; *PLANTS; *TOXIC ELEMENTS; *TOXIC SUBSTANCES; *TOXICITY

DESCRIPTIVE NOTE: 61P. PRICE: $5.00

ABSTRACT: THIS LISTING INCLUDES CHEMICAL ELEMENTS IDENTIFIED AS TOXIC TO ANIMAL AND VEGETABLE LIFE FORMS, BUT PERHAPS NOT AS WELL STUDIED AS LEAD, MERCURY, CADMIUM, AND THE LIKE. THE AVAILABLE DATA ARE PRESENTED FOR ANTIMONY, BARIUM, BISMUTH, BORON, CESIUM, GALLIUM, GERMANIUM, INDIUM, MOLYBDENUM, SILVER, TELLURIUM, THALLIUM, TIN (ORGANIC AND INORGANIC), URANIUM, AND ZIRCONIUM.

AVAILABILITY: PUBLICATIONS, NRCC/CNRC, OTTAWA, ONTARIO, KIA OR6, CANADA

IRIS ACCESSION NUMBER: EW009053

PUBLICATION DATE: 82

TITLE: ENVIRONMENTAL AUDIT HANDBOOK.

PERSONAL AUTHOR: TRUITT, THOMAS H.

DESCRIPTOR: *AUDITS; *COMPLIANCE; *ENVIRONMENTAL AUDITS; *HANDBOOKS

DESCRIPTIVE NOTE: 333P. PRICE: $75.00

ABSTRACT: VOLUNTARY ENVIRONMENTAL COMPLIANCE AUDITING CAN REDUCE THE BURDEN OF EPA INSPECTIONS AND PENALTIES. THIS

BOOK EXPLAINS HOW AND WHY TO MAKE AUDITS, AND IN WHAT AREAS.

AVAILABILITY: EXECUTIVE ENTERPRISES PUBLICATIONS CO., 33 WEST 60TH STREET, NEW YORK, NY 10023

IRIS ACCESSION NUMBER: EW009054

PUBLICATION DATE: 82

TITLE: EXPOSURE COMMITMENT ASSESSMENTS OF ENVIRONMENTAL POLLUTANTS. VOLUME 2 - MARC REPORT NO. 28.

PERSONAL AUTHOR: BENNETT, B. G.

DESCRIPTOR: *CHROMIUM; *EXPOSURE EFFECTS; *POLLUTANTS; *POLYCHLORINATED BIPHENYLS; *SELENIUM

DESCRIPTIVE NOTE: 427P. PRICE: $4.00

ABSTRACT: THIS VOLUME EXAMINES THE NATURAL CYCLE, ANTHROPOGENIC SOURCES, METABOLISM, EFFECTS, AND SEVERAL OTHER ASPECTS OF POLYCHLORINATED BIPHENYLS, SELENIUM, AND CHROMIUM.

AVAILABILITY: MONITORING AND ASSESSMENT RESEARCH CENTRE, OCTAGON BUILDING, 459A FULHAM ROAD, LONDON SW10 0QX, UNITED KINGDOM

IRIS ACCESSION NUMBER: EW009055

PUBLICATION DATE: 82

TITLE: GUIDE TO SAFE HANDLING OF COMPRESSED GASES.

DESCRIPTOR: *COMPRESSED GASES; *GASES; *INSTRUCTIONAL MATERIALS; *MATERIALS HANDLING; *MONITORING; *POST SECONDARY EDUCATION; *SAFETY; *STORAGE

ABSTRACT: THIS BOOK DISCUSSES THE DESIGN AND OPERATION OF GAS SYSTEMS, CHARACTERISTICS OF GASES, MONITORING WORKROOM AIR, CYLINDER HANDLING AND STORAGE, AND OTHER RELATED TOPICS. THE MATERIAL WILL BE USEFUL TO CHEMICAL LABORATORIES, CHEMICAL PLANTS, AND FACILITIES HANDLING COMPRESSED GASES.

AVAILABILITY: MATHESON, P. O. BOX 1587P, SECAUCUS, NJ 07094

IRIS ACCESSION NUMBER: EW009056

PUBLICATION DATE: 82

TITLE: FLOC PROPERTY EFFECTS ON SLUDGE DEWATERING CHARACTERISTICS.

PERSONAL AUTHOR: KNOCKE, WILLIAM R.; WAKELAND, DOUGLAS L.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *FLOC EFFECTS; *SLUDGE DEWATERING; *SOLIDS DETERMINATION

DESCRIPTIVE NOTE: 65P. PRICE: $6.00

ABSTRACT: TOPICS COVERED INCLUDE FLOC PARTICLE SIZE, WATER CONTENT ANALYSIS, WASTE SOURCE DESCRIPTIONS, TESTS TO DETERMINE IF SLUDGE CAN BE PROPERLY HANDLED, SOLIDS DETERMINATION, AND OTHER ASPECTS.

AVAILABILITY: VIRGINIA WATER RESOURCES RESEARCH CENTER, 617 NORTH MAIN STREET, BLACKSBURG, VA 24060-3397.

IRIS ACCESSION NUMBER: EW009057

PUBLICATION DATE: 82

TITLE: GERAGHTY & MILLER'S GROUND-WATER BIBLIOGRAPHY.

PERSONAL AUTHOR: VANDER LEEDEN, FRITS

DESCRIPTOR: *BIBLIOGRAPHIES; *GROUNDWATER; *HYDROLOGY; *RESEARCH; *WATER RESOURCES; *WATER SUPPLY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 400P.

ABSTRACT: INCLUDED ARE OVER 4,000 SELECTED PAPERS, BOOKS, JOURNALS AND BULLETINS ON THE SUBJECT OF GROUNDWATER. COMPILED BY A HYDROGEOLOGIST ACTIVELY WORKING FOR A MAJOR CONSULTING FIRM, THE GUIDE CONTAINS BOTH "CLASSIC" WORKS AND SIGNIFICANT NEW ONES IN A PRACTICAL AND CONCISE FORMAT WHICH OFFERS THE READER A QUICK REFERENCE GUIDE TO THE LITERATURE IN THE FIELD.

AVAILABILITY: WATER INFORMATION CENTER, INC., 6800 JERICHO TPKE., SYOSSET, NY 11791

IRIS ACCESSION NUMBER: EW009058

PUBLICATION DATE: 82

TITLE: ADVANCES IN THE IDENTIFICATION & ANALYSIS OF ORGANIC POLLUTANTS IN WATER; TWO VOLUMES.

PERSONAL AUTHOR: KEITH, LAWRENCE H.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *IDENTIFICATION; *LABORATORY PROCEDURES; *ORGANIC POLLUTANTS; *SAMPLING; *STATE-OF-THE-ART REVIEWS

DESCRIPTIVE NOTE: 1215P. PRICE: $79.90

ABSTRACT: THE 57 CHAPTERS COVER NEARLY ALL ASPECTS OF DETECTING, COLLECTING, ANALYZING, AND IDENTIFYING ORGANIC CONTAMINANTS. THERE ARE GRAPHS, CHARTS, TABLES, AND REFERENCES TO SUPPLEMENT THIS STATE-OF-THE-ART PUBLICATION.

AVAILABILITY: ANN ARBOR SCIENCE, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW009059

TITLE: IMPROVING WELL AND PUMP EFFICIENCY.

PERSONAL AUTHOR: HELWEG, OTTA J.; AND OTHERS

DESCRIPTOR: *COMPUTER SOFTWARE; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *POST SECONDARY EDUCATION; *PUMPS; *WATER WELLS; *WELLS; *WATER SUPPLY

DESCRIPTIVE NOTE: 168P. PRICE: $15.60 MEMBER; $19.50 NON-MEMBER.

ABSTRACT: THIS PUBLICATION HAS FACTS, IDEAS, AND SOFTWARE PROGRAMS TO HELP IMPROVE PUMP AND WELL OPERATIONS. THE SOFTWARE PROGRAMS ARE DESIGNED TO OPERATE ON CALCULATORS AND COMPUTERS. INFORMATION WILL HELP TEST PUMP PERFORMANCE, SET PUMP RATES, AND KNOW WHEN PUMPS OR WELLS NEED MAINTENANCE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, DATA PROCESSING DEPT., 6666 WEST QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW009060

PUBLICATION DATE: 81

TITLE: INTERNATIONAL RESEARCH ON SALINE IRRIGATION WATERS: AN ANNOTATED BIBLIOGRAPHY 1950-1980.

PERSONAL AUTHOR: GUPTA, I. C.; PAHWA, K. N.

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIBLIOGRAPHIES; *IRRIGATION; *RESEARCH; *SALINE WATERS; *WATER RESOURCES; *WATER SUPPLY; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 406P.

ABSTRACT: THE FINDINGS OF RESEARCH INVESTIGATIONS CONDUCTED IN MANY COUNTRIES THROUGHOUT THE WORLD OVER THE PAST THREE DECADES ON THE USE OF SALINE AND SEAWATER FOR IRRIGATION HAVE BEEN COLLECTED AND ARE SUMMARIZED IN THIS VOLUME. THIS ANNOTATED BIBLIOGRAPHY INCLUDES 884 ABSTRACTS OF ORIGINAL RESEARCH PAPERS, REVIEWS, BOOKS, BULLETINS, MONOGRAPHS, AND PROCEEDINGS AND TRANSACTIONS OF SYMPOSIA, CONFERENCES, AND CONGRESSES. AUTHOR, SUBJECT, SOURCE, AND GEOGRAPHICAL INDEXES ARE PROVIDED. THE BOOK SHOULD BE OF CONSIDERABLE INTEREST TO RESEARCH WORKERS, SCHOLARS, PLANNERS AND EXTENSION WORKERS AND IN PARTICULAR TO THOSE WORKING IN SEMI-ARID AND ARID ZONES WHO ARE INVOLVED WITH THE USE OF SALINE WATERS FOR IRRIGATION.

AVAILABILITY: AGICOLE PUBLISHING ACADEMY, D-76 PANCHSHEEL ENCLAVE, NEW DELHI - 110 017, INDIA

IRIS ACCESSION NUMBER: EW009061

PUBLICATION DATE: 83

TITLE: LAND TREATMENT OF HAZARDOUS WASTES.

PERSONAL AUTHOR: PARR, JAMES F.; AND OTHERS

DESCRIPTOR: *CHEMICALS; *HAZARDOUS WASTES; *LAND TREATMENT; *MANAGEMENT; *RESEARCH; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 422P. PRICE: $45.00

ABSTRACT: THIS BOOK PRESENTS A CRITICAL REVIEW AND ASSESSMENT OF CURRENT KNOWLEDGE AND MANAGEMENT PRACTICES FOR ULTIMATE DISPOSAL OF A NUMBER OF WASTE CHEMICALS. IT PROVIDES USEFUL INFORMATION AND STRATEGIES FOR THE DESIGN, DEVELOPMENT, AND EFFECTIVE MANAGEMENT OF LAND TREATMENT SYSTEMS FOR HAZARDOUS WASTES, AND IDENTIFIES AREAS OF RESEARCH THAT ARE NEEDED TO MAXIMIZE THE POTENTIAL VALUE OF LAND TREATMENT SYSTEMS AND TO MINIMIZE ASSOCIATED RISKS.

AVAILABILITY: NOYES DATA CORP., MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW009062

PUBLICATION DATE: 82

TITLE: LAND RECLAMATION AND BIOMASS PRODUCTION WITH MUNICIPAL WASTEWATER AND SLUDGE.

PERSONAL AUTHOR: SOPPER, WILLIAM E.

DESCRIPTOR: *BIOMASS PRODUCTION; *LAND RECLAMATION; *SLUDGE; *WASTEWATER; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 524P. PRICE: $20.00

ABSTRACT: THIS IS A COLLECTION OF 33 PAPERS RELATED TO USING MUNICIPAL WASTEWATER AND SLUDGE TO RECLAIM ALL KINDS OF DISTURBED LANDS. STRIP-MINED LAND RECOVERY, GRAVEL-PIT, IRON-ORE-EXCAVATION, AND FOREST-DAMAGED LANDS ARE DISCUSSED.

AVAILABILITY: PENNSYLVANIA STATE UNIVERSITY PRESS, 215 WAGNER BUILDING, UNIVERSITY PARK, PA 16802

IRIS ACCESSION NUMBER: EW009064

PUBLICATION DATE: 82

TITLE: A MANAGER'S GUIDE TO PERFORMANCE APPRAISAL.

DESCRIPTOR: *EVALUATION; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *MBO; *PERFORMANCE EVALUATION; *POST SECONDARY EDUCATION; *PERSONNEL EVALUATION

DESCRIPTIVE NOTE: 188P. PRICE: $15.95

ABSTRACT: THIS PUBLICATION INDICATES HOW MBO ENABLES MANAGERS TO PLAN AND CONTROL WORK FLOW, MAKE EQUITABLE COMPENSATION DECISIONS, AND COMPLY WITH EQUAL EOMPLOYMENT STANDARDS IN MINORITY RECRUITMENT, TRAINING AND PROMOTION BY BASING COMPENSATION ON CLEARLY STATED, OBJECTIVE AND DEFENSIBLE CRITERIA. THE BOOK'S ULTIMATE PURPOSE IS TO TEACH MANAGERS HOW TO USE PERFORMANCE APPRAISAL TO MOTIVATE PEOPLE

TO WORK HARDER AND "SMARTER."

AVAILABILITY: FREE PRESS, A DIVISION OF MACMILLAN PUBLISHING CO., 866 THIRD AVENUE, NEW YORK, NY 10022

IRIS ACCESSION NUMBER: EW009065

PUBLICATION DATE: 82

TITLE: MANUAL OF INDIVIDUAL WATER SUPPLY SYSTEMS.

DESCRIPTOR: *GROUNDWATER; *INDIVIDUAL SUPPLIES; *WATER POLLUTION CONTROL; *WATER DISTRIBUTION; *WATER TREATMENT; *WATER RESOURCES; *WELLS; *WATER SUPPLY

DESCRIPTIVE NOTE: 156P. STOCK NUMBER 055-000-00229-1.

ABSTRACT: THIS PUBLICATION FOCUSES PRIMARILY ON GROUNDWATER AND WELLS SINCE THESE COMPRISE OVER 90 PERCENT OF EXISTING INDIVIDUAL SYSTEMS. THE MANUAL DESCRIBES SELECTION OF A WATER SOURCE, EXTRACTING GROUNDWATER, SURFACE WATER FOR RURAL USE, WATER TREATMENT, PUMPING, DISTRIBUTION, AND STORAGE. APPENDICES SUGGEST AN ORDINANCE FOR USE BY LOCAL AUTHORITIES FOR LEGAL CONTROLS TO ASSURE PROTECTION OF GROUNDWATER QUALITY AND INCLUDE A BIBLIOGRAPHY AND ADDRESSES AND PHONE NUMBERS FOR EPA REGIONAL WATER SUPPLY AGENCIES AND REGIONAL OFFICES.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

IRIS ACCESSION NUMBER: EW009066

PUBLICATION DATE: 83

TITLE: MEMBRANE FILTRATION: A USER'S GUIDE AND REFERENCE MANUAL.

PERSONAL AUTHOR: BROCK, THOMAS D.

DESCRIPTOR: *FILTRATION; INDUSTRIES; *INSTRUCTIONAL MATERIALS; LABORATORIES; *MEMBRANE FILTERS; *POST SECONDARY EDUCATION; *REFERENCE MANUALS

DESCRIPTIVE NOTE: 381P. PRICE: $29.95

ABSTRACT: FOR USE AS A REFERENCE TOOL OR AN ON-THE-JOB TRAINING MANUAL, THIS PRACTICAL GUIDE CONTAINS STATE-OF-THE-ART TECHNIQUES AND INFORMATION ON LABORATORY, INDUSTRIAL, AND PHARMACEUTICAL USES OF MEMBRANE FILTERS. A PARTICULARLY USEFUL APPENDIX CONTAINS AN UP-TO-DATE LIST OF ALL MANUFACTURERS NOW MAKING MEMBRANE FILTERS AND ACCESSORIES, AND A LIST OF THEIR PRODUCTS.

AVAILABILITY: SCIENCE TECH., INC., P. O. BOX 55090, MADISON, WI 53705

IRIS ACCESSION NUMBER: EW009067

PUBLICATION DATE: 82

TITLE: 1982 ANNUAL BOOK OF ASTM STANDARDS: PART 41.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *GOVERNMENT STANDARDS; *INDUSTRY; *MANUFACTURING; *STANDARDS; *STATISTICAL METHODS; *TEST METHOD STANDARDS; *TESTING STANDARDS; *TECHNOLOGY

DESCRIPTIVE NOTE: 1584P. PRICE: $64.00

ABSTRACT: THE LATEST DEVELOPMENTS IN THE DYNAMIC FIELD OF GENERAL TEST METHOD STANDARD SETTING AND OTHER AREAS ARE INCLUDED IN THIS INDISPENSABLE REFERENCE WORK. PART 41 CONTAINS OVER 194 STANDARDS, RANGING FROM STATISTICAL METHODS TO TECHNICAL ASPECTS OF PRODUCTS LIABILITY LITIGATION. ALL 14 OF THE U.S. DEFENSE DEPARTMENT'S NEW STANDARDS ARE INCLUDED.

AVAILABILITY: ASTM, 1916 RACE STREET, PHILADELPHIA, PA 19103

IRIS ACCESSION NUMBER: EW009068

PUBLICATION DATE: 82

TITLE: OZONIZATION MANUAL FOR WATER AND WASTEWATER TREATMENT.

PERSONAL AUTHOR: MASSCHELEIN, W. J.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *COSTS; *DISINFECTION; *OZONE; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 324P. PRICE: $41.95

ABSTRACT: THIS BOOK IS DIVIDED INTO PARTS DISCUSSING OZONE GENERATION, WATER OZONIZATION PRINCIPLES, PRACTICAL ASPECTS, AND OZONE ANALYSIS. CRITICAL QUESTIONS IN OZONE PRACTICE, COSTS, NEW DEVELOPMENTS, AND FLOW SHEETS ARE ALSO PRESENTED. THE EDITOR IS PRESIDENT OF THE EUROPEAN COMMITTEE OF THE INTERNATIONAL OZONE ASSOCIATION.

AVAILABILITY: JOHN WILEY & SONS, INC., 605 THIRD AVE., NEW YORK, NY 10016

IRIS ACCESSION NUMBER: EW009069

TITLE: PHYSICAL HYDROGEOLOGY.

PERSONAL AUTHOR: FREEZE, R. A.; BACK, W.

DESCRIPTOR: *GROUNDWATER; *HYDROLOGY; *MANAGEMENT; *NORTH AMERICA; *RESEARCH; *WATER RESOURCES

DESCRIPTIVE NOTE: 448P. PRICE: $48.00

ABSTRACT: THIS IS A COLLECTION OF PAPERS EMPHASIZING

PHYSICALLY-BASED GROUNDWATER RESEARCH IN NORTH AMERICA. CONTENTS INCLUDE: THEORETICAL INVESTIGATION OF THE MOTION IN GROUNDWATERS; COMPRESSIBILITY AND ELASTICITY OF ARTESIAN AQUIFERS; THE EQUATION OF GROUNDWATER FLOW IN FIXED AND DEFORMING COORDINATES; WELL AND AQUIFER HYDRAULICS; THEORY OF AQUIFER TESTS; USE OF NUMERICAL METHODS FOR ANALYZING DATA ON GROUNDWATER LEVELS; GROUNDWATER MANAGEMENT FOR THE NATION'S FUTURE; AND REGIONAL FLOW INCLUDING GEOLOGY AND GROUNDWATER RESOURCES OF THE BALTIMORE AREA.

AVAILABILITY: SCIENTIFIC AND ACADEMIC EDITIONS, 135 WEST 50TH STREET., NEW YORK, NY 10020

IRIS ACCESSION NUMBER: EW009070

PUBLICATION DATE: 82

TITLE: POLLUTION AND THE BIOLOGICAL RESOURCES OF THE OCEAN.

PERSONAL AUTHOR: PATIN, S. A.

DESCRIPTOR: *BIOLOGY; *ECOLOGY; *MARINE BIOLOGY; *OCEANOGRAPHY; *POLLUTION; *RECOMMENDATIONS; *WATER RESOURCES; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 287P. PRICE: $85.95

ABSTRACT: WRITTEN BY THE DEPUTY DIRECTOR OF THE ALL-UNION RESEARCH INSTITUTE OF MARINE FISHERIES AND OCEANOGRAPHY OF THE SOVIET UNION, THIS GENERAL REFERENCE WORK PRESENTS THE FIRST GLOBAL-SCALE RECOMMENDATIONS FOR MAXIMUM PERMISSABLE CONCENTRATIONS OF THE MOST WIDELY DISTRIBUTED POLLUTANTS IN THE "WORLD OCEAN." PATIN DRAWS ON EXPERIMENTAL RESULTS FROM MANY DISCIPLINES TO JUSTIFY HIS CONCLUSIONS.

AVAILABILITY: BUTTERWORTH SCIENTIFIC, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW009071

PUBLICATION DATE: 82

TITLE: THE PROCEEDINGS OF THE 1982 MADISON CONFERENCE OF APPLIED RESEARCH AND PRACTICE ON MUNICIPAL AND INDUSTRIAL WASTE.

DESCRIPTOR: *CASE STUDIES; *CONFERENCE PROCEEDINGS; *CONTAMINATION; *GROUNDWATER; *LAND APPLICATION; *LANDFILLS; LEACHATE CONTROLS; SITING PROCEDURES; SLUDGE; *WASTE DISPOSAL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 650P. PRICE: $25.00

ABSTRACT: THESE CONFERENCE PROCEEDINGS CONTAIN TECHNICAL PRESENTATIONS ON MUNICIPAL SLUDGE MANAGEMENT, GROUNDWATER QUALITY AND LANDFILL SITING PROCEDURES; LAND APPLICATION OF MUNICIPAL AND INDUSTRIAL SLUDGE; GROUNDWATER QUALITY PROTECTION; LANDFILL GAS AND LEACHATE CONTROL; CASE STUDIES OF GRAOUNDWATER CONTAMINATION; NITROGEN, HEAVY METAL AND ORGANIC CHEMICAL CONCERNS WHEN LAND APPLYING MUNICIPAL SLUDGE; USE OF SLUDGE ON AGRICULTURAL AND FORESTED LANDS; AND LAND APPLICATION OF SPECIAL WASTES.

AVAILABILITY: RUTH ANN MONTGOMERY, DEPARTMENT OF ENGINEERING & APPLIED SCIENCE, UNIVERSITY OF WISCONSIN-EXTENSION, 432 NORTH LAKE STREET, MADISON, WI 53706

IRIS ACCESSION NUMBER: EW009072

PUBLICATION DATE: 82

TITLE: PROCEEDINGS OF THE SIXTH NATIONAL GROUND-WATER QUALITY SYMPOSIUM.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; CONTAMINATION; *FEDERAL ROLE; *GROUNDWATER; LEGISLATION; MANAGEMENT; MONITORING; *POLICY DEVELOPMENT; *STATE ROLE; *WATER POLLUTION CONTROL; *WATER RESOURCES

DESCRIPTIVE NOTE: PRICE: $25.00

ABSTRACT: THIS PUBLICATION IS THE PROCEEDINGS OF A CONFERENCE HELD SEPT., 1982 IN ATLANTA, GEORGIA. PAPERS CONSIDER THE NEEDS OF REGIONAL, STATE, COUNTY AND MUNICIPAL JURISDICTIONS IN GROUNDWATER PROTECTION. TOPICS INCLUDE: AN OVERVIEW OF LAWS DEALING WITH GROUNDWATER; DEVELOPING A COMPREHENSIVE GROUNDWATER MANAGEMENT PROGRAM; STATE POLICY AND TOOLS FOR MANAGING AND PROTECTING GROUNDWATER; IDENTIFICATION AND CLASSIFICATION OF AQUIFERS; THE BISCAYNE AQUIFER PROJECT--A LOCAL WELLFIELD PROTECTION PROGRAM; BEST MANAGEMENT PRACTICES FOR AVOIDING GROUNDWATER CONTAMINATION PROBLEMS INCLUDING PREVENTION AND DETECTION OF LEAKS FROM UNDERGROUND GASOLINE STORAGE SYSTEMS; DEVELOPING A WORKABLE GROUNDWATER MONITORING PROGRAM; AND DEALING WITH EXISTING GROUNDWATER CONTAMINATION PROBLEMS.

AVAILABILITY: SIXTH NATIONAL GROUNDWATER QUALITY SYMPOSIUM PROCEEDINGS, NATIONAL WATER WELL ASSOCIATION, 500 W. WILSON BRIDGE ROAD, WORTHINGTON, OH 43085

IRIS ACCESSION NUMBER: EW009073

PUBLICATION DATE: APR 83

TITLE: RAIN AND STORMWATER HARVESTING IN RURAL AREAS.

DESCRIPTOR: NATURAL RESOURCES; *RAIN; *RURAL AREAS; *STORMWATER; *WATER CONSERVATION; *WATER RESOURCES; *WATER SUPPLY; *WATER HARVESTING; *WATER COLLECTION; *WATER STORAGE; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 236P.

ABSTRACT: THIS PUBLICATION IS A REPORT BY THE UNITED NATIONS ENVIRONMENT PROGRAM ON RAIN AND STORMWATER HARVESTING IN RURAL AREAS. CONTENTS INCLUDE SECTIONS ON ROOFS AND GROUND CATCHMENT, CONTOUR TERRACING, SILT-TRAPS AND CANALS, HAFFIRS AND BUNDS, DESIGN AND EVALUATION OF RAINWATER HARVESTING SCHEMES, AND RECOMMENDATIONS AND CRITERIA FOR PILOT PROJECTS.

AVAILABILITY: UNIPUB, 1180 AVENUE OF THE AMERICAS, NEW YORK, NY 10036

IRIS ACCESSION NUMBER: EW009074

PUBLICATION DATE: APR 83

TITLE: RIVER BASIN DEVELOPMENT.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *DEVELOPMENT; *INTERNATIONAL LAW; *RIVERS; *RIVERBASIN DEVELOPMENT; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 239P.

ABSTRACT: THIS PUBLICATION ON RIVER BASIN DEVELOPMENT IS THE PROCEEDINGS OF A SYMPOSIUM HELD IN DACCA, BANGLADESH IN 1981. INCLUDED ARE PAPERS ON RIVER BASIN DEVELOPMENT AND INTERNATIONAL LAW, THE KEYNOTE ADDRESS, AND LAWS GOVERNING INTERNATIONAL WATERS.

AVAILABILITY: UNIPUB, 1180 AVENUE OF THE AMERICAS, NEW YORK, NY 10036

IRIS ACCESSION NUMBER: EW009075

PUBLICATION DATE: 82

TITLE: ROLE OF WATER IN URBAN ECOLOGY.

PERSONAL AUTHOR: HENGEVELD, H.; DE VOCHT, C.

DESCRIPTOR: *CASE STUDIES; *ECOLOGY; *HYDROLOGY; *MANAGEMENT; *URBAN AREAS; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 360P. PRICE: 86.00

ABSTRACT: THIS BOOK DISCUSSES TOPICS RELATED TO URBAN WATER SYSTEMS, SUCH AS URBAN HYDROLOGY, WATER MANAGEMENT, NATURE IN URBAN SETTLEMENTS, AND WATER SYSTEM PLANNING. CASE STUDIES ARE GIVEN.

AVAILABILITY: ELSEVIER SCIENCE PUBLISHING CO., INC., 52 VANDERBILT AVE., NEW YORK, NY 10017

IRIS ACCESSION NUMBER: EW009077

PUBLICATION DATE: 83

TITLE: STORMWATER MANAGEMENT IN URBANIZING AREAS.

PERSONAL AUTHOR: WHIPPLE, WILLIAM; AND OTHERS

DESCRIPTOR: FLOODING; *MANAGEMENT; PLANNING; *STORMWATER; *SURFACE RUNOFF; *URBAN AREAS; *WASTEWATER COLLECTION; WATER RESOURCES; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 234P. PRICE: 24.95

ABSTRACT: COMPILED BY SIX RESPECTED PROFESSIONAL ENGINEERS, THIS BOOK EXPLAINS THE NEW CONCEPT OF STORMWATER MANAGEMENT. THE CONCEPT HAS BEEN DEVELOPED FROM THE NOW OBSOLETE DETENTION BASINS OF THE 1970S TO A MORE DYNAMIC MANAGEMENT SYSTEM AIMED AT REDUCING FLOODING POTENTIAL AND RUN-OFF POLLUTION.

AVAILABILITY: PRENTICE-HALL, INC., ENGLEWOOD CLIFFS, NJ 07632

IRIS ACCESSION NUMBER: EW009078

PUBLICATION DATE: 83

TITLE: SUPERFUND ANALYSIS.

PERSONAL AUTHOR: SULLIVAN, THOMAS F. P.

DESCRIPTOR: ENVIRONMENT; *EPA; *FEDERAL PROGRAMS; *HAZARDOUS WASTES; LEGISLATION; *LIABILITY; *PROGRAM DESCRIPTIONS; *SUPERFUND; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 233P. PRICE: $48.00

ABSTRACT: THIS NOTEBOOK EXPLAINS THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA, OR SUPERFUND). IT CONSIDERS THE LAW'S SCOPE; A LIST OF WASTES DEEMED HAZARDOUS; LIABILITY ISSUES; TAX REGULATIONS FOR SUPERFUND FUNDING; A NATIONAL CONTINGENCY PLAN FOR LIABLE PARTIES; AND PERSONAL INJURY COMPENSATION. THE STATUTE'S COMPLETE TEXT IS INCLUDED.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., 966 HUNGERFORD DR., ROCKVILLE, MD 20850

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*DESORPTION (1) EW008847

*DETENTION BASINS (1) EW008682

DETENTION BASINS (1) EW008716

*DETERMINISTIC CONCEPTS (1) EW008901

*DEVELOPING COUNTRIES (2) EW008747 EW009045

*DEVELOPMENT (3) EW008775 EW008790 EW009074

*DEWATERING (2) EW008663 EW008665

DEWATERING (1) EW008664

*DIAMETER SELECTION (1) EW008819

*DILUTION (1) EW008818

*DIRECTORIES (1) EW008750

*DISEASES (2) EW009024 EW009025

*DISINFECTION (8) EW007946 EW008602 EW008714 EW008955 EW008957 EW008977 EW008979 EW009068

*DISSOLVED OXYGEN (2) EW008668 EW008888

*DISTRICT OF COLUMBIA (1) EW008882

*DOCUMENTATION (1) EW008782

*DOSE-RESPONSE (1) EW008595

*DRAINAGE (3) EW008733 EW008824 EW009042

*DRINKING WATER (26) EW008595 EW008596 EW008653 EW008654 EW008675 EW0086[illegible] EW008692 EW008693 EW008694 EW008697 EW008711 EW008746 EW008763 EW008798 EW008802 EW008836 EW008841 EW008842 EW008855 EW008876 EW008955 EW008964 EW008968 EW008980 EW009024 EW009025

*DRYING BEDS (1) EW008926

*DUAL SYSTEMS (1) EW008684

*DUPONT PACT PROCESS (1) EW008970

*EARTHQUAKES (1) EW008681

*ECOLOGY (4) EW008743 EW008767 EW009070 EW009075
*ECONOMIC FACTORS (3) EW008672 EW008727 EW008728
ECONOMIC FACTORS (8) EW008615 EW008616 EW008617 EW008619 EW008663 EW008679 EW008692 EW008731
ECONOMIC IMPACTS (1) EW008812
*ECONOMICS (10) EW008595 EW008596 EW008599 EW008645 EW008656 EW008685 EW008963 EW009045 EW009048 EW009050
ECONOMICS (2) EW008708 EW008976
*EDUCATIONAL PROGRAMS (2) EW007668 EW008764
*EFFICIENCY (2) EW008850 EW008866
*EFFLUENT (2) EW008953 EW008972
*EFFLUENT DISCHARGE (1) EW008885
*EFFLUENTS (15) EW008482 EW008483 EW008647 EW008714 EW008770 EW008785 EW008787 EW008790 EW008794 EW008843 EW008855 EW008898 EW008900 EW008974 EW008977
EFFLUENTS (2) EW008667 EW008681
*ELECTRIC POWER GENERATORS (1) EW008712
*ELECTRIC POWER PLANTS (1) EW008843
*ELECTRIC POWER STATIONS (1) EW008712
*ELECTRODIALYSIS (1) EW008763
*ELECTROLYTIC SIDESTREAM PROCESS (1) EW008657
EMBRYOTOXINS (1) EW008583
*EMPLOYEE RELATIONS (1) EW008754
*EMPLOYMENT OPPORTUNITIES (1) EW008914
ENERGY (2) EW008750 EW008976
*ENERGY CONSERVATION (3) EW008731 EW008774 EW008805
*ENERGY CONSUMPTION (1) EW008892
*ENERGY EFFICIENCY (1) EW008866
*ENERGY RECOVERY (1) EW008805
*ENFORCEMENT (1) EW008690
*ENGINEERING (7) EW004174 EW008696 EW008697 EW008716 EW008737 EW008891 EW009042
ENGINEERING (3) EW008693 EW008694 EW008732
*ENGINEERING APPLICATIONS (1) EW008823
*ENGINEERING EDUCATION (1) EW004174
ENGINEERS (1) EW008754

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*ENVIRONMENT	(8)	EW008651 EW008707 EW008744 EW008767 EW008782 EW008949 EW008950 EW009045
ENVIRONMENT	(1)	EW009078
*ENVIRONMENTAL ASSESSMENT	(2)	EW008776 EW008797
*ENVIRONMENTAL AUDITS	(2)	EW008721 EW009053
*ENVIRONMENTAL COMPLIANCE	(1)	EW008721
*ENVIRONMENTAL CONCERNS	(1)	EW008839
*ENVIRONMENTAL DATA	(1)	EW008651
ENVIRONMENTAL EDUCATION	(3)	EW008990 EW008991 EW008992
*ENVIRONMENTAL EFFECTS	(1)	EW008796
*ENVIRONMENTAL IMPACTS	(8)	EW008350 EW008709 EW008733 EW008792 EW008795 EW008814 EW008827 EW008978
*ENVIRONMENTAL IMPACT STATEMENTS	(5)	EW008615 EW008616 EW008617 EW008619 EW008796
ENVIRONMENTAL IMPACT STATEMENTS	(1)	EW008708
*ENVIRONMENTAL LOADING	(1)	EW008948
*ENVIRONMENTAL PROBLEMS	(2)	EW008708 EW008978
*ENVIRONMENTAL PROTECTION	(2)	EW008750 EW008782
ENVIRONMENTAL PROTECTION AGENCY	(1)	EW008698
*ENVIRONMENTAL QUALITY	(2)	EW008697 EW008750
*ENVIRONMENTAL SCIENCES	(1)	EW008748
*EPA	(2)	EW008722 EW009078
*EQUATIONS	(1)	EW008823
*EQUIPMENT	(9)	EW008601 EW008634 EW008658 EW008659 EW008703 EW008790 EW008828 EW008829 EW008969
EQUIPMENT	(9)	EW008584 EW008661 EW008673 EW008674 EW008675 EW008677 EW008678 EW008810 EW008917
*EQUIPMENT REVIEWS	(1)	EW008913
*EROSION	(1)	EW008768
*ESTIMATION	(2)	EW008744 EW008823
*EUROPE	(1)	EW009044
*EVALUATION	(10)	EW008614 EW008633 EW008773 EW008796 EW008800 EW008826 EW008827 EW008831 EW008913 EW009064
EVALUATION	(4)	EW008615 EW008616 EW008617 EW008834

*EVALUATION GUIDES (1) EW008913
*EXPERIMENTS (1) EW008821
*EXPOSURE EFFECTS (1) EW009054
*EXPOSURE LIMITS (1) EW008713
*FACILITIES (30) EW007668 EW008482 EW008483 EW008601 EW008602 EW008603 EW008611
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EW008704 EW008731 EW008839 EW008844 EW008885 EW008891 EW008893 EW008894
EW008895 EW008896 EW008964 EW008970 EW008974 EW008979 EW009011
FACILITIES (4) EW008712 EW008724 EW008869 EW008873
*FACILITY GUIDELINES (3) EW008611 EW008612 EW008613
*FACILITY IMPROVEMENT (3) EW008611 EW008612 EW008613
*FEASIBILITY STUDIES (1) EW008948
*FECAL COLIFORMS (1) EW008667
FEDERAL AGENCIES (1) EW008809
*FEDERAL PROGRAMS (1) EW009078
*FEDERAL ROLE (1) EW009072
*FERTILIZER (1) EW008745
*FIELD TESTS (1) EW008614
FILTER PRESSES (1) EW008859
*FILTERS (1) EW008663
*FILTRATION (7) EW008667 EW008714 EW008846 EW008928 EW008974 EW009024 EW009066
FILTRATION (1) EW008711
*FINAL REPORTS (1) EW008614
*FINANCES (1) EW008596
*FINANCING (3) EW008704 EW008727 EW008728
FINANCING (1) EW008873
*FIRST AID (1) EW008713
*FISH (1) EW008814
*FISH KILLS (1) EW008814
*FLOC EFFECTS (1) EW009056
*FLOOD CONTROL (1) EW009042
FLOODING (1) EW009077
*FLORIDA (9) EW008603 EW008671 EW008672 EW008788 EW008798 EW008841 EW008843
EW008850 EW008851

*FLOTATION THICKENING	(1)	EW008922	
*FLOW EQUALIZATION	(1)	EW008885	
FLOW MEASUREMENT	(1)	EW008719	
FLOW RATES	(1)	EW008729	
*FLOTATION	(1)	EW008714	
*FOOD PROCESSING	(1)	EW008751	
*FORECASTING	(2)	EW008598	EW008822
*FORESTRY	(1)	EW008745	
FORESTRY	(1)	EW008620	
*FOURIER TRANSFORM SPECTROSCOPY	(1)	EW008706	
*FRANCE	(1)	EW008712	
*FUNCTIONS	(1)	EW008830	
*GAC	(1)	EW008847	
*GALVANIZED PIPES	(1)	EW008674	
*GAS	(1)	EW008795	
*GASES	(1)	EW009055	
*GEOCHEMISTRY	(1)	EW008718	
GEOLOGY	(2)	EW008737	EW009041
*GEOMON	(1)	EW008658	
*GERMANY	(1)	EW008712	
GOALS	(1)	EW008835	
*GOAL SETTING	(1)	EW008833	
*GOVERNMENT AGENCIES	(1)	EW008750	
GOVERNMENT AGENCIES	(1)	EW008914	
*GOVERNMENT ROLE	(1)	EW008704	
*GOVERNMENT STANDARDS	(1)	EW009067	
*GRANTS	(1)	EW008690	
*GRANULAR ACTIVATED CARBON	(2)	EW008847	EW008957
*GRASSY SWALES	(1)	EW008881	
*GRAVITY SANITARY SEWERS	(1)	EW008732	
*GRAVITY THICKENERS	(1)	EW008921	
*GREAT LAKES	(1)	EW008710	

*GROUNDWATER	(21)	EW008584 EW008648 EW008655 EW008658 EW008671 EW008715 EW008733 EW008753 EW008789 EW008800 EW008803 EW008807 EW008841 EW009027 EW009041 EW009046 EW009057 EW009065 EW009069 EW009071 EW009072
GROUNDWATER	(4)	EW008737 EW008743 EW008746 EW008775
*GUIDEBOOKS	(1)	EW008797
GUIDED DISCOVERY	(1)	EW008834
*GUIDELINES	(2)	EW004174 EW008727
GUIDELINES	(2)	EW008725 EW008732
*GUIDES	(7)	EW008670 EW008718 EW008722 EW008777 EW008778 EW008788 EW008809
*HABITAT ASSESSMENT	(1)	EW008951
*HABITAT PARAMETERS	(1)	EW008951
*HANDBOOKS	(6)	EW008634 EW008744 EW008755 EW008798 EW008799 EW009053
*HAZARD ASSESSMENT	(1)	EW008900
*HAZARDOUS MATERIALS	(3)	EW008715 EW008723 EW008738
HAZARDOUS MATERIALS	(2)	EW008678 EW008992
*HAZARDOUS WASTES	(5)	EW008698 EW008723 EW008738 EW009061 EW009078
*HEALTH	(1)	EW008707
HEALTH	(1)	EW008750
*HEALTH EFFECTS	(5)	EW008583 EW008675 EW008709 EW008770 EW008986
*HEALTH HAZARDS	(1)	EW008713
*HEAT	(1)	EW008805
*HEATING	(2)	EW008774 EW008805
*HEAT RECOVERY	(1)	EW008885
HEAT TREATMENT (SLUDGE)	(1)	EW008861
*HEAVY METALS	(3)	EW008669 EW008956 EW008978
*HENRY'S LAW	(1)	EW008950
*HIGHER EDUCATION	(1)	EW004174
HIGHER EDUCATION	(1)	EW008708
*HISTORY	(1)	EW009047
*HOMES	(2)	EW008779 EW008800
*HOUSEHOLD SEWAGE	(1)	EW008779
*HUMIC SUBSTANCES	(1)	EW008968
*HYDRAULIC FLOW	(1)	EW008821

*HYDRAULICS (1) EW008719
HYDRAULICS (2) EW008670 EW008781
*HYDROGEN SULFIDE (1) EW008883
*HYDROGEOLOGY (2) EW008737 EW009041
*HYDROLOGIC ANALYSIS (1) EW008716
*HYDROLOGY (5) EW008716 EW009046 EW009057 EW009069 EW009075
HYDROLOGY (5) EW008620 EW008648 EW008737 EW008772 EW008803
HYDROLYSIS (1) EW008700
*IDENTIFICATION (2) EW008773 EW009058
*IDENTIFICATION GUIDES (1) EW009043
*ILLINOIS (2) EW008677 EW008770
*IMAGE PROCESSING (1) EW008651
*IMPERVIOUS AREAS (1) EW008824
*IMPLEMENTATION (1) EW004174
*INCENTIVES (2) EW008833 EW008854
*INCINERATION (2) EW008665 EW008929
*INDEXES (3) EW008646 EW008676 EW008750
INDEXES (3) EW008990 EW008991 EW008992
*INDIANA (2) EW008615 EW008683
*INDICATOR ORGANISMS (1) EW008846
*INDIVIDUAL SUPPLIES (1) EW009065
*INDUSTRIAL EFFLUENTS (1) EW008773
*INDUSTRIAL USE (1) EW008645
*INDUSTRIAL WASTES (10) EW008714 EW008725 EW008747 EW008777 EW008792 EW008794 EW008806 EW008952 EW008967 EW009011
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*INDUSTRIAL WASTEWATER (1) EW008970
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INDUSTRY (3) EW008728 EW008750 EW008774
*INFILTRATION (3) EW008660 EW008953 EW008972
*INFLOW (1) EW008660

INFORMATION DISSEMINATION	(3)	EW008990 EW008991 EW008992
*INFORMATION MANAGEMENT SYSTEMS	(1)	EW008652
*INFORMATION NEEDS	(2)	EW008620 EW008791
*INFORMATION RETRIEVAL	(1)	EW008646
*INFORMATION SOURCES	(3)	EW008750 EW008812 EW008914
*INFRARED	(1)	EW008771
*INHIBITORS	(1)	EW008677
*INSPECTION	(1)	EW008723
INSPECTION	(1)	EW008729
*INSTALLATION	(1)	EW008793
*INSTRUCTION	(6)	EW008633 EW008649 EW008831 EW008834 EW008864 EW008874
INSTRUCTIONAL DESIGN	(1)	EW008994
*INSTRUCTIONAL DEVELOPMENT	(1)	EW008994
*INSTRUCTIONAL IMPROVEMENT	(2)	EW008633 EW008994
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INSTRUCTIONAL MATERIALS	(4)	EW008612 EW008860 EW008864 EW008994
*INSTRUMENTATION	(4)	EW007946 EW008101 EW008658 EW008668
INSTRUMENTATION	(1)	EW008584
INTERNAL CORROSION	(1)	EW008673
*INTERNATIONAL LAW	(1)	EW009074
*ION-EXCHANGE	(1)	EW008836
*IOWA	(2)	EW008800 EW008801
*IRON	(1)	EW008889
*IRRIGATION	(8)	EW008680 EW008733 EW008807 EW008852 EW008953 EW009042 EW009043 EW009060
IRRIGATION	(3)	EW008753 EW008774 EW008803
*JETS	(1)	EW008821
JOBS	(1)	EW008914

*JOB SKILLS (1) EW008993
*JOB TRAINING (1) EW008993
*KINETICS (3) EW008888 EW008890 EW008898
*LABORATORIES (2) EW008289 EW008652
LABORATORIES (1) EW009066
*LABORATORY EQUIPMENT (1) EW008719
*LABORATORY INSTRUCTION (1) EW008719
*LABORATORY PRACTICES (1) EW008776
*LABORATORY PROCEDURES (18) EW008634 EW008655 EW008700 EW008730 EW008744 EW008755 EW008771 EW008784 EW008799 EW008810 EW008849 EW008857 EW008859 EW008860 EW008861 EW008862 EW008985 EW009058
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*LABORATORY SAFETY (1) EW008568
*LABORATORY SKILLS (2) EW008634 EW008730
*LABORATORY TECHNIQUES (6) EW008634 EW008653 EW008654 EW008706 EW008748 EW008911
LABORATORY TESTS (1) EW008827
*LAGOONS (4) EW008766 EW008804 EW008858 EW008878
*LAKES (2) EW008718 EW008950
LAKES (1) EW008619
*LAND APPLICATION (5) EW008662 EW008669 EW008745 EW008886 EW009071
LAND APPLICATION (1) EW008483
*LANDFILLS (3) EW008685 EW008930 EW009071
*LAND RECLAMATION (1) EW009062
LAND RECLAMATION (1) EW008781
*LAND TREATMENT (3) EW008483 EW008972 EW009061
*LAND USE (2) EW008620 EW008781
*LATIN AMERICA (1) EW008873
LEACHATE CONTROLS (1) EW009071
LEACHATES (1) EW008738
*LEACHING (1) EW008966
*LEAD (2) EW008655 EW008675
*LEAF DISPOSAL (1) EW008685
*LEAKAGE (1) EW008879

*LEAK DETECTION (1) EW008600
*LEAKS (2) EW008600 EW008840
*LEARNING THEORY (1) EW008649
*LEGAL ASPECTS (1) EW008795
*LEGISLATION (1) EW009047
LEGISLATION (3) EW008708 EW009072 EW009078
*LESSON PLANS (1) EW008994
*LIABILITY (2) EW009048 EW009078
*LIFT STATIONS (1) EW008702
*LIME (2) EW008664 EW008980
*LIMS (1) EW008652
*LINDANE (1) EW008896
*LITERATURE REVIEWS (4) EW008583 EW008814 EW008945 EW008951
*LOW-PRESSURE PIPES (1) EW008793
LUMBER (1) EW008662
*MAGNESIUM (1) EW008664
*MAINE (1) EW008877
*MAINTENANCE (25) EW008600 EW008633 EW008661 EW008668 EW008673 EW008677 EW008701
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EW009027 EW009059
MAINTENANCE (1) EW008917
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*MANAGEMENT (57) EW004174 EW008596 EW008598 EW008620 EW008652 EW008656 EW008663
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*MANAGEMENT STYLE (1) EW008850
*MANAGEMENT SYSTEMS (1) EW008787
*MANAGERS (2) EW008649 EW008833
*MANGROVES (1) EW008788

*MANHOLES	(1)	EW008840
*MANUALS	(9)	EW008716 EW008721 EW008723 EW008724 EW008725 EW008726 EW008732 EW008738 EW008780
MANUALS	(1)	EW008694
*MANUFACTURING	(1)	EW009067
MANUFACTURING	(1)	EW008914
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*MARINE ENVIRONMENT	(3)	EW008350 EW008739 EW008767
MARKETING	(1)	EW008679
MARYLAND	(1)	EW008692
*MASSACHUSETTS	(3)	EW008675 EW008838 EW008854
*MASS MEDIA	(1)	EW008856
*MATERIALS	(1)	EW008790
*MATERIALS BALANCE	(1)	EW008948
*MATERIALS HANDLING	(1)	EW009055
*MATHEMATICAL APPLICATIONS	(2)	EW008101 EW008716
MATHEMATICAL APPLICATIONS	(1)	EW008737
*MATHEMATICAL MODELS	(3)	EW008670 EW008676 EW008809
*MATHEMATICS	(1)	EW008748
*MBO	(1)	EW009064
*MEASUREMENT	(3)	EW008713 EW008726 EW008748
MEASUREMENT	(1)	EW008737
*MEMBRANE FILTERS	(1)	EW009066
*METALS	(6)	EW008655 EW008675 EW008783 EW008792 EW008806 EW008956
*METERS	(1)	EW008853
*METRIC SYSTEM	(1)	EW008726
*MICHIGAN	(6)	EW008616 EW008617 EW008619 EW008656 EW008764 EW008789
*MICROBIOLOGY	(2)	EW008802 EW008846
MICROBIOLOGY	(2)	EW008679 EW008743
*MICROCOMPUTERS	(2)	EW008851 EW008913
*MICROSCOPY	(1)	EW008755
MICROSCOPY	(1)	EW008748
*MINE DRAINAGE	(1)	EW008889

*MINING (2) EW008648 EW008781
*MINING INDUSTRY (1) EW008648
MISSION STATEMENTS (1) EW008835
*MISSOURI (2) EW008657 EW008980
*MODEL DEVELOPMENT (1) EW008802
*MODELING (2) EW008670 EW008809
MODELING (1) EW008350
*MODELS (13) EW008715 EW008791 EW008809 EW008818 EW008821 EW008822 EW008824 EW008895 EW008948 EW008949 EW008955 EW008984 EW009046
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MONITORING (4) EW008350 EW008584 EW008747 EW009072
*MONITORING NETWORKS (1) EW008899
*MULTIPLE HEARTH FURNACE (1) EW008929
*MULTIPORT DIFFUSERS (1) EW008818
*MUNICIPALITIES (5) EW008620 EW008720 EW008725 EW008769 EW008783
MUNICIPALITIES (2) EW008671 EW008728
*MUNICIPAL USE (1) EW008645
*MUNICIPAL WASTES (3) EW008745 EW008766 EW008792
MUNICIPAL WASTES (1) EW008804
*NATURAL RESOURCES (7) EW008648 EW008750 EW008775 EW008798 EW008852 EW008854 EW008951
NATURAL RESOURCES (2) EW009041 EW009073
*NEUTRALIZATION (1) EW008889
*NEW ENGLAND (1) EW008876
*NEW JERSEY (1) EW009041
*NEW MEXICO (1) EW008763
NEW YORK (1) EW008692
*NITRIFICATION (2) EW008882 EW008897
*NOISE (1) EW008708
NOISE (1) EW008712
*NONPOINT SOURCE POLLUTION (2) EW008765 EW008945
*NORTH AMERICA (1) EW009069
*NORTH CAROLINA (1) EW008793

*NPDES PERMITS	(1)	EW008787
*NUTRIENT LOADS	(1)	EW008984
OBJECTIVES	(1)	EW008835
*OCEANOGRAPHY	(3)	EW009048 EW009050 EW009070
*OCEANOLOGY	(1)	EW008767
*OCEAN OUTFALLS	(2)	EW008681 EW008818
*OCEANS	(2)	EW008350 EW008718
*ODOR CONTROL	(2)	EW008657 EW008883
ODOR CONTROL	(1)	EW008774
*ODORS	(2)	EW008657 EW008883
*OGALLALA AQUIFER	(1)	EW008852
*OHIO	(2)	EW008836 EW008839
*OIL	(1)	EW008795
OIL	(1)	EW008976
*OIL SPILL CONTROL	(1)	EW008780
*OIL SPILLS	(5)	EW008780 EW008828 EW008829 EW009048 EW009050
*OIL SPILL TREATMENT	(1)	EW008780
*OIL WELLS	(1)	EW008828
*ONSITE DETENTION	(1)	EW008682
*ONSITE TREATMENT	(9)	EW008601 EW008615 EW008616 EW008617 EW008707 EW008778 EW008779 EW008967 EW009044
*ONSITE TREATMENT SYSTEMS	(2)	EW008800 EW008801
*ONSITE WASTE TREATMENT	(1)	EW009027
*OPERATING CAPACITY	(1)	EW008895
*OPERATING PROCEDURES	(1)	EW008871
*OPERATIONS	(1)	EW008724
*OPERATIONS (WASTEWATER)	(73)	EW007668 EW008482 EW008510 EW008611 EW008612 EW008613 EW008614 EW008647 EW008656 EW008657 EW008659 EW008701 EW008702 EW008707 EW008714 EW008729 EW008731 EW008747 EW008751 EW008772 EW008783 EW008793 EW008794 EW008800 EW008812 EW008858 EW008859 EW008860 EW008861 EW008862 EW008863 EW008864 EW008865 EW008869 EW008870 EW008878 EW008882 EW008884 EW008888 EW008890 EW008891 EW008893 EW008894 EW008895 EW008896 EW008897 EW008898 EW008917 EW008918 EW008920 EW008921 EW008922 EW008923 EW008924 EW008925 EW008926 EW008927 EW008928 EW008929 EW008930 EW008953 EW008956 EW008967 EW008969 EW008970 EW008974 EW008979 EW008993 EW008994 EW009011 EW009044

		EW009051 EW009068
OPERATIONS (WASTEWATER)	(1)	EW008704
*OPERATIONS (WATER)	(21)	EW007946 EW008596 EW008602 EW008656 EW008692 EW008693 EW008694 EW008711 EW008772 EW008802 EW008836 EW008841 EW008842 EW008844 EW008850 EW008915 EW008957 EW008962 EW008968 EW009059 EW009068
OPERATIONS (WATER)	(1)	EW008880
*OPERATOR TRAINING	(4)	EW008701 EW008730 EW008870 EW008917
OPERATOR TRAINING	(1)	EW008729
*ORGANIC CHLORINE	(1)	EW008845
*ORGANIC COMPOUNDS	(7)	EW008700 EW008744 EW008771 EW008880 EW008949 EW008950 EW008957
*ORGANIC CONTAMINANTS	(1)	EW008847
*ORGANIC POLLUTANTS	(1)	EW009058
*ORGANIC PRODUCTS	(1)	EW008777
*ORGANIZATION	(2)	EW008722 EW008776
*ORGANIZATIONAL CHANGE	(1)	EW008834
*OUTFALL SEWERS	(1)	EW008350
*OVERLAND FLOW	(1)	EW008886
OXIDATION	(1)	EW008700
*OXYGEN METERS	(1)	EW008668
*OXYGEN SYSTEMS	(1)	EW008892
*OXYGEN TRANSFER	(1)	EW008888
*OZONATION	(2)	EW008666 EW008880
*OZONE	(3)	EW008977 EW008980 EW009068
*PACIFIC NORTHWEST	(1)	EW008745
PALEOECOLOGY	(1)	EW008743
*PAPERS	(1)	EW008720
PAPERS	(1)	EW008773
PARKS	(1)	EW008750
*PARTICULATES	(2)	EW008601 EW008770
*PCBS	(1)	EW008710

*PCE (1) EW008876
*PENNSYLVANIA (1) EW008678
*PERFORMANCE AUDITS (1) EW008826
*PERFORMANCE EVALUATION (50) EW008482 EW008483 EW008510 EW008600 EW008601 EW008655 EW008656 EW008664 EW008665 EW008667 EW008668 EW008674 EW008677 EW008678 EW008692 EW008703 EW008741 EW008804 EW008867 EW008868 EW008873 EW008877 EW008878 EW008886 EW008891 EW008892 EW008893 EW008894 EW008896 EW008897 EW008898 EW008911 EW008913 EW008952 EW008956 EW008962 EW008964 EW008967 EW008968 EW008969 EW008970 EW008972 EW008974 EW008977 EW008979 EW008980 EW009011 EW009024 EW009059 EW009064
PERFORMANCE EVALUATION (3) EW008676 EW008701 EW008724
PERFORMANCE STANDARDS (1) EW008835
*PERSONNEL (3) EW008722 EW008750 EW008832
*PERSONNEL EVALUATION (1) EW009064
*PERSONNEL RELATIONS (1) EW008850
*PEST (1) EW008949
*PEST CONTROL (1) EW009043
*PESTICIDES (8) EW008583 EW008739 EW008792 EW008945 EW008952 EW008964 EW008967 EW008985
PESTICIDES (3) EW008990 EW008991 EW008992
*PESTS (1) EW009043
*PH (2) EW008676 EW008845
PH (1) EW008677
*PHOSPHATES (1) EW008677
*PHOSPHORUS (1) EW008945
*PHOTOGRAPHY (1) EW008768
PHOTOLYSIS (1) EW008700
*PHYSICAL PROPERTIES (2) EW008713 EW008823
PHYSICAL PROPERTIES (1) EW008482
*PIEZOMETERS (1) EW008658
PILOT PLANTS (1) EW008483
*PILOT PROJECTS (1) EW008787
*PILOT STUDIES (1) EW008957
*PIPE BENDS (1) EW008817
*PIPE NETWORKS (1) EW008819

*PIPE REPAIRS (1) EW008838
*PIPE REPLACEMENT (1) EW008963
*PIPES (9) EW008673 EW008674 EW008675 EW008790 EW008817 EW008819 EW008838 EW008868 EW008966
PIPES (2) EW008719 EW008876
*PIPES (WATER) (2) EW008674 EW008675
PIPES (WATER) (1) EW008101
*PLANKTON (1) EW008792
*PLANNING (28) EW008597 EW008598 EW008616 EW008619 EW008663 EW008671 EW008683 EW008716 EW008725 EW008769 EW008776 EW008782 EW008797 EW008809 EW008825 EW008826 EW008839 EW008851 EW008872 EW008874 EW008875 EW008877 EW008901 EW008913 EW008915 EW008918 EW008978 EW009042
PLANNING (9) EW008584 EW008615 EW008617 EW008620 EW008724 EW008783 EW008873 EW008976 EW009077
*PLANTING (1) EW008788
*PLANTS (2) EW009043 EW009052
*PLASTICS (1) EW008790
PLUME MANAGEMENT (1) EW008679
*POINT-OF-USE TREATMENT (1) EW008601
*POINT SOURCE DISCHARGES (1) EW008787
*POLICIES (3) EW008595 EW008835 EW008871
*POLICY DEVELOPMENT (1) EW009072
*POLICY FORMATION (1) EW008809
*POLLUTANTS (5) EW008666 EW008771 EW008814 EW008986 EW009054
POLLUTANTS (1) EW008785
*POLLUTION (9) EW008708 EW008715 EW008723 EW008767 EW008768 EW008795 EW009048 EW009050 EW009070
POLLUTION (1) EW008800
POLLUTION ABATEMENT (1) EW008829
*POLLUTION CONTROL (10) EW008712 EW008715 EW008723 EW008725 EW008765 EW008780 EW008789 EW008827 EW008828 EW008829
POLLUTION CONTROL (2) EW008350 EW008747
*POLYCHLORINATED BIPHENYLS (2) EW008669 EW009054
*POLYCHLORINATED HYDROCARBONS (1) EW008985
*POLYURETHANE (1) EW008840
*POST SECONDARY EDUCATION (46) EW008289 EW008633 EW008634 EW008647 EW008693 EW008694 EW008708

EW008709 EW008719 EW008726 EW008730 EW008731 EW008732 EW008739 EW008743
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POST SECONDARY EDUCATION (14) EW008568 EW008611 EW008612 EW008613 EW008755 EW008810 EW008834
EW008859 EW008860 EW008990 EW008991 EW008992 EW008993 EW008994

*POTABLE WATER (3) EW008601 EW008603 EW008841

PRECIPITATION (1) EW008751

*PREDICTION (5) EW008817 EW008821 EW008822 EW008824 EW008950

*PRESS CONFERENCES (1) EW008856

*PRESS PROGRAMS (1) EW008856

*PRETREATMENT (1) EW008783

*PREVENTIVE MAINTENANCE (5) EW008661 EW008673 EW008675 EW008677 EW008825

*PRINCIPLES (1) EW008911

*PRIORITY POLLUTANTS (1) EW008666

*PRIVATE SECTOR OWNERSHIP (1) EW008704

*PRIVATIZATION (1) EW008704

*PROBLEMS (1) EW008648

PROBLEM SOLVING (1) EW008698

*PROCEDURES (1) EW008835

*PROCESS CONTROL (3) EW008869 EW008882 EW008884

PROCESS CONTROL (2) EW008101 EW008730

*PROCESS CONTROLS (3) EW008863 EW008864 EW008865

*PROCESS DESCRIPTIONS (2) EW007668 EW008657

PROCESS DESCRIPTIONS (1) EW008482

*PROCESS DESIGN (1) EW008976

*PROCESS EVALUATION (1) EW008836

*PRODUCT EVALUATION (1) EW008868

*PRODUCTIVITY (2) EW008832 EW008833

*PROGRAM DESCRIPTIONS (7) EW008568 EW008656 EW008670 EW008673 EW008692 EW008764 EW009078

PROGRAM DESCRIPTIONS (1) EW008724

*PROGRAM DEVELOPMENT (3) EW008690 EW008724 EW008831

PROGRAM DEVELOPMENT (1) EW008725

*PROGRAM ENFORCEMENT	(1)	EW008690
*PROGRAM IMPLEMENTATION	(2)	EW004174 EW008698
*PROGRAMMING	(1)	EW008782
*PROGRAM REVIEWS	(1)	EW008661
*PROGRAM VALIDATION	(1)	EW008831
PROGRESS REPORT	(1)	EW008827
*PROJECT REPORTS	(1)	EW008953
*PROJECT SUMMARIES	(1)	EW008972
*PROTEIN	(1)	EW008751
*PROTEIN RECOVERY	(1)	EW008751
*PUBLICATIONS	(1)	EW008646
*PUBLIC HEALTH	(8)	EW008595 EW008697 EW008707 EW008798 EW008978 EW009024 EW009025 EW009045
PUBLIC HEALTH	(5)	EW008583 EW008690 EW008696 EW008745 EW008750
*PUBLIC OPINION	(1)	EW008883
*PUBLIC RELATIONS	(1)	EW008856
*PULP MILLS	(1)	EW008785
*PUMPING STATIONS	(1)	EW009049
*PUMPS	(3)	EW008702 EW009049 EW009059
PUMPS	(1)	EW008719
*PVC PIPES	(1)	EW008966
*QUALITY CONTROL	(2)	EW008289 EW008776
QUALITY CONTROL	(1)	EW008993
*RADIATION	(1)	EW008776
RADIOACTIVE WASTES	(1)	EW008696
*RAIN	(2)	EW008822 EW009073
RAINFALL	(1)	EW008716
*RAPID INFILTRATION	(1)	EW008482
*RATES	(4)	EW008599 EW008645 EW008727 EW008728
*RATE STRUCTURES	(2)	EW008727 EW008728
*REACTORS	(1)	EW008666
*RECLAIMED WATER	(2)	EW008842 EW008953
*RECLAMATION	(1)	EW008962

*RECOMMENDATIONS (6) EW008670 EW008856 EW008899 EW008900 EW008948 EW009070

*RECORDKEEPING (1) EW008915

*RECORDS (4) EW008661 EW008721 EW008826 EW008882

*RECREATION (1) EW008953

*RECYCLING (8) EW008664 EW008680 EW008720 EW008794 EW008843 EW008889 EW008953
EW008976

*REFERENCE MANUALS (1) EW009066

*REFERENCE MATERIALS (1) EW008755

*REGIONAL SYSTEMS (1) EW008873

REGIONAL SYSTEMS (1) EW008663

*REGULATIONS (7) EW008289 EW008697 EW008712 EW008723 EW008802 EW009027 EW009047

REGULATIONS (1) EW008678

*REGULATORY AREAS (1) EW008871

REMOTE SENSING (1) EW008748

*REPAIRS (2) EW008600 EW008840

*REPORTING (1) EW008826

*RESEACH METHODOLOGY (1) EW008951

*RESEARCH (19) EW008595 EW008596 EW008597 EW008600 EW008648 EW008662 EW008715
EW008770 EW008803 EW008805 EW008806 EW008807 EW008817 EW008818 EW009041
EW009057 EW009060 EW009061 EW009069

*RESEARCH NEEDS (2) EW008598 EW008599

RESEARCH NEEDS (1) EW009041

*RESEARCH REPORTS (58) EW008350 EW008483 EW008583 EW008584 EW008664 EW008665 EW008666
EW008667 EW008669 EW008673 EW008674 EW008675 EW008676 EW008677 EW008696
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RESEARCH REPORTS (2) EW008620 EW008663

*RESERVOIRS (1) EW008766

RESIDENCES (1) EW008728

*RESIDENTIAL USE (1) EW008741

*RESIDUAL CHLORINE (1) EW008849

RESOURCE MATERIALS (2) EW008612 EW008613

*RESPONSE PROCEDURES (1) EW008789

*RESPONSIBILITIES	(1)	EW008722
*REVENUE	(1)	EW008879
*REVENUES	(1)	EW008853
*REVERSE OSMOSIS	(4)	EW008603 EW008763 EW008841 EW008842
REVERSE OSMOSIS	(1)	EW008751
RISKS	(1)	EW008709
*RIVERBASIN DEVELOPMENT	(1)	EW009074
*RIVERS	(2)	EW008950 EW009074
*ROTATING BIOLOGICAL CONTACTORS	(1)	EW008888
*RUBBER	(1)	EW008790
*RUNOFF	(1)	EW008791
RUNOFF	(2)	EW008775 EW008781
*RURAL AREAS	(7)	EW008763 EW008769 EW008778 EW008801 EW008872 EW008877 EW009073
RURAL AREAS	(1)	EW008753
*SAFETY	(9)	EW008289 EW008568 EW008602 EW008672 EW008713 EW008724 EW008738 EW008978 EW009055
SAFETY	(3)	EW008729 EW008858 EW008917
SAFETY EQUIPMENT	(1)	EW008568
*SAFETY PROGRAMS	(1)	EW008672
*SALINE WATERS	(1)	EW009060
*SALINITY	(1)	EW008807
*SALT WATER	(2)	EW008684 EW008803
*SAMPLE PRESERVATION	(1)	EW008799
*SAMPLERS	(1)	EW008658
*SAMPLING	(7)	EW008658 EW008669 EW008730 EW008799 EW008802 EW008846 EW009058
SAMPLING	(1)	EW008584
*SANITARY ENGINEERS	(2)	EW008696 EW008697
SANITARY ENGINEERS	(1)	EW008690
*SANITARY LANDFILLS	(1)	EW008930
*SANITATION	(1)	EW009045
*SATELLITE SYSTEMS	(1)	EW008871
*SATISFACTION	(1)	EW008833
SCALES	(1)	EW008101

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*SCIENCE EQUIPMENT (1) EW008810
SCIENTISTS (1) EW008754
*SEATTLE (1) EW008662
*SEDIMENTATION (1) EW008714
*SEISMIC CONSIDERATIONS (1) EW008681
*SELECTION (1) EW008830
*SELENIUM (1) EW009054
*SELF PACED INSTRUCTION (1) EW007668
*SEMINARS (1) EW008690
*SEPTIC SYSTEMS (1) EW008801
*SEPTIC TANKS (3) EW008779 EW008898 EW009027
*SEQUENCING BATCH REACTORS (1) EW008897
*SERVICE DELIVERY (1) EW008692
*SETTLING (1) EW008884
*SETTLING TANKS (1) EW008887
*SEWAGE (3) EW008482 EW008647 EW008985
SEWAGE (2) EW008350 EW008619
*SEWAGE SYSTEMS (3) EW008615 EW008616 EW008617
*SEWERAGE CHARGES (1) EW008728
*SEWER REPAIRS (2) EW008825 EW008837
*SEWERS (7) EW008683 EW008732 EW008825 EW008837 EW008851 EW008867 EW008868
*SILVICULTURE (1) EW008662
*SIMULATIONS (1) EW008949
*SITE SELECTION (1) EW008930
*SITING (1) EW008793
SITING PROCEDURES (1) EW009071
*SKILL DEVELOPMENT (2) EW008634 EW008831
*SLIDE RULES (1) EW008101
*SLIDES (2) EW008647 EW008865
SLIDES (1) EW008810
*SLOW INFILTRATION (1) EW008483
*SLUDGE (36) EW008659 EW008662 EW008663 EW008664 EW008665 EW008669 EW008685
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SLUDGE (4) EW008611 EW008697 EW008976 EW009071

*SLUDGE CHARACTERISTICS (1) EW008919

*SLUDGE COLLECTORS (1) EW008659

*SLUDGE CONDITIONERS (1) EW008866

*SLUDGE CONDITIONING (1) EW008920

*SLUDGE DEWATERING (1) EW009056

*SLUDGE DISPOSAL (2) EW008685 EW008976

*SLUDGE MANAGEMENT (1) EW008663

SLUDGE TREATMENT (2) EW008664 EW008731

*SMALL FLOWS (1) EW008778

*SMALL SYSTEMS (3) EW008875 EW008877 EW008915

*SMALL WATER SYSTEMS (2) EW008871 EW008873

*SMARTPROCESS (1) EW008834

*SOFTWARE REVIEWS (1) EW008913

SOIL (1) EW008669

*SOIL CONSERVATION SERVICE (1) EW008716

*SOILS (4) EW008779 EW008800 EW008807 EW008945

SOILS (3) EW008733 EW008745 EW008803

*SOLIDS DETERMINATION (1) EW009056

*SOLID WASTES (2) EW008698 EW008708

SOLID WASTES (2) EW008697 EW008712

*SORBENT ANALYSIS (1) EW008827

*SORBENT EVALUATION (1) EW008827

*SORBENTS (1) EW008827

*SOURCE CONTROL (1) EW008765

*SOURCE IDENTIFICATION (1) EW008948

*SOUTH DAKOTA (2) EW008872 EW008972

SOUTHEASTERN U.S. (1) EW008620

*SPECIFICATIONS (1) EW008101

*SPECTROPHOTOMETERS (1) EW008810

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*SPECTROPHOTOMETRY	(1)	EW008810
*SPECTROSCOPY	(2)	EW008706 EW008771
*SPILL CLEANUP	(1)	EW008829
*SPILLS	(1)	EW008827
*SPILL TECHNOLOGY	(1)	EW008827
*SPRAY WELDING	(1)	EW008703
*STABILIZATION PONDS	(2)	EW008890 EW008972
*STAFF DEVELOPMENT	(3)	EW008832 EW008833 EW008834
*STAFFING	(2)	EW008826 EW008892
*STAFF SELECTION	(1)	EW008832
*STANDARDS	(8)	EW008697 EW008726 EW008783 EW008875 EW008882 EW008891 EW008901 EW009067
STANDARDS	(1)	EW008873
*STARCH-IODINE	(1)	EW008849
*STATE AGENCIES	(1)	EW008692
STATE AGENCIES	(1)	EW008690
*STATE-OF-THE-ART REVIEWS	(6)	EW008584 EW008737 EW008751 EW008809 EW008829 EW009058
*STATE-OF-THE-ART-REVIEWS	(1)	EW008739
*STATE PROGRAMS	(1)	EW008698
*STATE ROLE	(1)	EW009072
*STATISTICAL DATA	(1)	EW009048
*STATISTICAL METHODS	(1)	EW009067
*STATISTICS	(3)	EW008718 EW008748 EW008799
STATISTICS	(1)	EW008710
*STEAM GENERATING PLANTS	(1)	EW008866
*STEEL	(1)	EW008978
*STOCHASTIC CONCEPTS	(1)	EW008901
*STORAGE	(1)	EW009055
*STORM SEWERS	(1)	EW008682
*STORMWATER	(2)	EW009073 EW009077
STORMWATER	(1)	EW008716
*STORM WATER RUNOFF	(1)	EW008818
*STREAM ECOLOGY	(1)	EW008743

*STREAMS (4) EW008718 EW008743 EW008765 EW008766
STREAMS (1) EW008733
*STRIP MINING (1) EW008781
*STUDENT CHARACTERISTICS (1) EW008994
*STUDY GUIDES (1) EW008693
*SUBSEA CONTAINMENT (1) EW008828
*SULFATES (1) EW008986
*SUPERFUND (1) EW009078
*SUPERVISION (3) EW008754 EW008832 EW008833
*SUPERVISORS (6) EW008830 EW008831 EW008832 EW008833 EW008834 EW008874
*SUPERVISOR TRAINING (2) EW008830 EW008831

*SURFACE RUNOFF (6) EW008682 EW008791 EW008822 EW008824 EW008881 EW009077
SURFACE RUNOFF (2) EW008716 EW008818
*SURVEYING (1) EW008768
SURVEYING (1) EW008748
*SURVEYS (15) EW008602 EW008620 EW008660 EW008721 EW008728 EW008796 EW008801 EW008809 EW008830 EW008831 EW008879 EW008883 EW008899 EW008914 EW008969
*SUSPENDED SOLIDS (1) EW008887
*SYSTEM IMPROVEMENTS (1) EW008877
*SYSTEMS ANALYSIS (1) EW009042
TEACHER IMPROVEMENT (1) EW008994
*TEACHING GUIDES (18) EW008611 EW008694 EW008719 EW008858 EW008859 EW008860 EW008861 EW008862 EW008864 EW008918 EW008919 EW008921 EW008922 EW008923 EW008924 EW008925 EW008927 EW008929
TEACHING GUIDES (1) EW008857
*TEACHING METHODS (1) EW008994
TECHNICAL EDUCATION (1) EW008993
*TECHNICAL MANUALS (1) EW008776
*TECHNICAL TRAINING (1) EW008835
*TECHNIQUES (1) EW008754
*TECHNOLOGICAL ADVANCEMENTS (4) EW008679 EW008696 EW008746 EW008751

*TECHNOLOGY (12) EW008648 EW008706 EW008707 EW008790 EW008794 EW008828 EW008829

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TECHNOLOGY	(5)	EW008772 EW008812 EW008990 EW008991 EW008992
*TECHNOLOGY TRANSFER	(1)	EW008764
*TEMPERATURE	(4)	EW008823 EW008845 EW008849 EW008888
*TERATOGENESIS	(1)	EW008583
*TESTING	(5)	EW008730 EW008782 EW008867 EW008868 EW008870
*TESTING STANDARDS	(1)	EW009067
*TEST ITEMS	(1)	EW008870
*TEST METHOD STANDARDS	(1)	EW009067
*TETRACHLOROETHYLENE	(1)	EW008876
*TEXAS	(1)	EW008853
*TEXTBOOKS	(2)	EW008746 EW008754
*THERMOCHEMICAL LIQUEFACTION	(1)	EW008976
*THM	(1)	EW008880
*TIME	(1)	EW008889
*TIN COMPOUNDS	(1)	EW008966
*TITRATION	(1)	EW008849
*TOTAL ORGANIC CARBON	(1)	EW008955
*TOXIC ELEMENTS	(1)	EW009052
*TOXICITY	(2)	EW008952 EW009052
*TOXICOLOGY	(2)	EW008739 EW008855
*TOXIC SUBSTANCES	(13)	EW008666 EW008739 EW008773 EW008783 EW008784 EW008785 EW008792 EW008855 EW008949 EW008952 EW008968 EW009027 EW009052
TOXIC SUBSTANCES	(1)	EW008738
*TRACE METALS	(1)	EW008655
*TRACKING PROCEDURES	(1)	EW008789
*TRAINING	(11)	EW008633 EW008701 EW008830 EW008831 EW008832 EW008834 EW008835 EW008844 EW008872 EW008874 EW008882
*TRAINING GUIDES	(1)	EW008926
*TRAINING METHODS	(2)	EW008857 EW008858
TRAINING NEEDS	(1)	EW008724
*TRAINING PROGRAMS	(7)	EW008649 EW008694 EW008701 EW008729 EW008730 EW008831 EW008834
TRAINING PROGRAMS	(1)	EW008693

*TRENDS (1) EW008899
*TRICHLOROETHYLENE (1) EW008678
*TRICKLING FILTERS (1) EW008974
*TRIHALOMETHANES (1) EW008957
*TROPICS (1) EW008775
*TROUBLESHOOTING (1) EW008633
*TURBIDITY (1) EW008955
*ULTRAVIOLET LIGHT (1) EW008977
*UNITED KINGDOM (1) EW008712
*UNITED STATES (2) EW008712 EW009044
UNIVERSITIES (1) EW008914
*URBAN AREAS (6) EW008682 EW008741 EW008791 EW008824 EW009075 EW009077
*U.S. ARMY (1) EW008787
*UTILITIES (1) EW008915
*VACUUM FILTRATION (1) EW008928
*VINYL LININGS (1) EW008876
*VIRGINIA (1) EW008842
*VIRUSES (1) EW008980
*VOLATILIZATION (1) EW008950
VOLATILIZATION (1) EW008700
*VOLUME REDUCTION (1) EW008927
*WASHINGTON (2) EW008662 EW008871
WASHINGTON (1) EW008692
*WASTE DISPOSAL (38) EW008350 EW008647 EW008662 EW008663 EW008669 EW008681 EW008683 EW008685 EW008698 EW008714 EW008715 EW008723 EW008725 EW008738 EW008745 EW008778 EW008858 EW008859 EW008878 EW008886 EW008918 EW008919 EW008920 EW008921 EW008923 EW008924 EW008925 EW008926 EW008927 EW008928 EW008929 EW008930 EW008993 EW009045 EW009061 EW009062 EW009071 EW009078
WASTE DISPOSAL (5) EW008696 EW008818 EW008990 EW008991 EW008992
*WASTE HEAT (2) EW008774 EW008805
*WASTE LEACHATES (1) EW008738
*WASTE MANAGEMENT (2) EW008698 EW008738
*WASTE TREATMENT (2) EW008738 EW008777

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*WASTEWATER                        (3)       EW008790  EW008799  EW009062

*WASTEWATER ANALYSIS               (1)       EW008706
*WASTEWATER COLLECTION             (17)      EW008660  EW008683  EW008702  EW008728  EW008729  EW008732  EW008822
                                   EW008824  EW008825  EW008837  EW008840  EW008851  EW008867  EW008868  EW008917
                                   EW008964  EW009077
*WASTEWATER DISCHARGE              (1)       EW008787
*WASTEWATER DISPOSAL               (1)       EW008818
*WASTEWATER RECLAMATION            (1)       EW008751
*WASTEWATER REUSE                  (1)       EW008812
 WASTEWATER REUSE                  (1)       EW008731
*WASTEWATER TREATMENT              (136)     EW007668  EW008289  EW008350  EW008482  EW008483  EW008510  EW008568
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                                   EW008634  EW008646  EW008647  EW008656  EW008657  EW008659  EW008660  EW008661
                                   EW008662  EW008664  EW008666  EW008667  EW008680  EW008681  EW008684  EW008685
                                   EW008696  EW008697  EW008701  EW008704  EW008707  EW008709  EW008714  EW008719
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                                   EW008745  EW008747  EW008751  EW008766  EW008769  EW008770  EW008772  EW008773
                                   EW008774  EW008777  EW008778  EW008779  EW008783  EW008785  EW008787  EW008793
                                   EW008794  EW008800  EW008801  EW008804  EW008805  EW008806  EW008839  EW008843
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                                   EW008929  EW008930  EW008952  EW008953  EW008956  EW008964  EW008967  EW008969
                                   EW008970  EW008972  EW008974  EW008976  EW008977  EW008979  EW008985  EW008990
                                   EW008991  EW008992  EW008993  EW008994  EW009011  EW009027  EW009044  EW009051
                                   EW009068
 WASTEWATER TREATMENT              (4)       EW008663  EW008665  EW008669  EW008812
 WASTEWATER USE                    (1)       EW008733
*WATER                             (6)       EW008708  EW008718  EW008790  EW008799  EW008823  EW008852
 WATER                             (3)       EW008990  EW008991  EW008992
*WATER ANALYSES                    (1)       EW008911
*WATER ANALYSIS                    (1)       EW008289
*WATER COLLECTION                  (1)       EW009073
*WATER CONSERVATION                (7)       EW008678  EW008684  EW008741  EW008798  EW008852  EW008854  EW009073
*WATER DEMAND                      (1)       EW008598
*WATER DISTRIBUTION                (19)      EW008596  EW008597  EW008600  EW008670  EW008673  EW008674  EW008675
                                   EW008684  EW008693  EW008694  EW008819  EW008838  EW008853  EW008871  EW008877
                                   EW008879  EW008963  EW008966  EW009065
*WATER FLOW                        (1)       EW008817
*WATER FLOW RATES                  (1)       EW008817
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*WATER HARVESTING (1) EW009073
*WATER INDUSTRY (1) EW008672
*WATER LOSSES (1) EW008879
*WATER MAINS (1) EW008838
*WATER MANAGEMENT (2) EW008680 EW008684
WATER MANAGEMENT (1) EW008670
*WATER METERS (1) EW008853
*WATER NEEDS (1) EW008842
*WATERNET (1) EW008646
*WATER PIPES (4) EW008819 EW008838 EW008876 EW008966
*WATER POLLUTION (4) EW008814 EW009046 EW009048 EW009050
WATER POLLUTION (5) EW008829 EW008990 EW008991 EW008992 EW008993
*WATER POLLUTION CONTROL (10) EW008803 EW008806 EW008881 EW008899 EW008945 EW008948 EW009057 EW009065 EW009071 EW009072
WATER POLLUTION CONTROL (2) EW008712 EW009077
*WATER QUALITY (54) EW004174 EW007946 EW008483 EW008595 EW008615 EW008616 EW008617 EW008619 EW008648 EW008658 EW008667 EW008675 EW008676 EW008678 EW008690 EW008692 EW008696 EW008697 EW008700 EW008706 EW008715 EW008720 EW008733 EW008763 EW008766 EW008769 EW008775 EW008781 EW008783 EW008789 EW008791 EW008807 EW008812 EW008814 EW008841 EW008876 EW008881 EW008899 EW008900 EW008901 EW008911 EW008945 EW008951 EW008957 EW008962 EW008963 EW008984 EW008990 EW008991 EW008992 EW008994 EW009024 EW009027 EW009047
WATER QUALITY (12) EW008101 EW008482 EW008584 EW008620 EW008693 EW008694 EW008718 EW008746 EW008750 EW008765 EW008772 EW008875
*WATER QUALITY CONTROL (1) EW008602
*WATER RATES (2) EW008599 EW008645
*WATER RECLAMATION (2) EW008678 EW008962
*WATER RESOURCES (45) EW008101 EW008584 EW008597 EW008598 EW008620 EW008648 EW008671 EW008679 EW008684 EW008692 EW008697 EW008720 EW008733 EW008737 EW008741 EW008743 EW008753 EW008764 EW008775 EW008781 EW008789 EW008798 EW008800 EW008809 EW008841 EW008842 EW008852 EW008854 EW008914 EW008990 EW008991 EW008992 EW009041 EW009042 EW009046 EW009047 EW009057 EW009060 EW009065 EW009069 EW009070 EW009072 EW009073 EW009074 EW009075
WATER RESOURCES (7) EW008670 EW008678 EW008696 EW008718 EW008750 EW008812 EW009077
*WATER REUSE (2) EW008680 EW008843
*WATER SERVICE (1) EW008599
*WATER SERVICES (1) EW008871
*WATERSHEDS (2) EW008620 EW008984
WATERSHEDS (1) EW008733

*WATER STORAGE
(1) EW009073

*WATER SUPPLY
(61) EW008595 EW008596 EW008597 EW008598 EW008599 EW008600 EW008601
EW008603 EW008645 EW008653 EW008654 EW008655 EW008656 EW008670 EW008671
EW008673 EW008674 EW008675 EW008677 EW008678 EW008679 EW008680 EW008684
EW008690 EW008693 EW008694 EW008741 EW008763 EW008769 EW008772 EW008773
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EW008914 EW008957 EW008963 EW009041 EW009042 EW009045 EW009046 EW009057
EW009059 EW009060 EW009065 EW009073 EW009074 EW009075

WATER SUPPLY
(2) EW008711 EW008753

*WATER SYSTEMS
(2) EW008692 EW008872

WATER SYSTEMS
(1) EW008875

*WATER TREATMENT
(50) EW007946 EW008289 EW008568 EW008597 EW008601 EW008602 EW008603
EW008634 EW008645 EW008646 EW008654 EW008673 EW008679 EW008680 EW008696
EW008697 EW008709 EW008711 EW008719 EW008746 EW008763 EW008769 EW008836
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EW008962 EW008968 EW008980 EW008990 EW008991 EW008992 EW009024 EW009025
EW009051 EW009065 EW009068

WATER TREATMENT
(3) EW008584 EW008874 EW008994

*WATER TREATMENT PRACTICES
(1) EW008602

*WATER USE
(4) EW008599 EW008741 EW008854 EW008879

WATER USE
(1) EW008753

*WATER UTILITIES
(5) EW008871 EW008872 EW008874 EW008875 EW008915

*WATER WELLS
(1) EW009059

WATMAN
(1) EW008875

*WELDING
(1) EW008703

*WELLS
(4) EW008584 EW008671 EW009059 EW009065

WELLS
(1) EW008737

WETLANDS
(1) EW008733

WOOD
(1) EW008662

*WORKBOOKS
(1) EW008917

WORK ENVIRONMENT
(1) EW008672

*WORKSHOPS
(1) EW008698

WORKSHOPS
(1) EW008773

*WORK STANDARDS
(1) EW008826

*WORLD PROBLEMS
(5) EW008747 EW009045 EW009060 EW009070 EW009073

*ZINC ACETATE
(1) EW008784

ZINC COATINGS	(1)	EW008674
*ZOOLOGY	(1)	EW008767
ZOOLOGY	(1)	EW008743